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The Magazine



MICROSURGERY

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MICROSURGERY

by Carolyn Reed

Using the operating microscope as eyes and tiny microinstruments as hands, surgeons at Rush-Presbyterian-St. Luke's have greatly expanded their patient treatment options and capabilities, and can dramatically improve their results.

Nineteen-year-old Tom Phillips was student-teaching a cabinet-making class when it happened. He was ripping boards on a table-saw when a student called out over the noise, and Tom glanced up. In that split second, the saw blade ripped through all four fingers and the thumb of his left hand.

Tom remembers running to the sink clutching his mangled hand and wrapping it hastily with wads of paper towelling. At St. James Hospital in Chicago Heights, the orthopedic surgeon on duty assessed the damage and immediately called Robert Schenck, M.D., Director of the Section of Hand Surgery at Rush-Presbyterian-St. Luke's Medical Center.

Tom was rushed to the Medical Center, and eighteen hours later, he had his fingers back.

A miracle? Not really. But without microsurgery it would not have been possible.

Medicine has seen many frontiers conquered during this century. Improved sanitation and hygiene have eradicated the last of the plagues. Twenty-five years ago, the advent of vaccines virtually wiped out polio and other devastating communicable diseases while antibiotics tamed numerous infectious diseases. Today, healthier diets and a keener awareness of the importance of physical fitness are lowering the risks of heart disease and stroke, while a cleaner environment and a better understanding of the body's own immune system may hold the keys for preventing and curing cancer.

Still there is no really effective way to mend broken or defective bodies but through surgery.

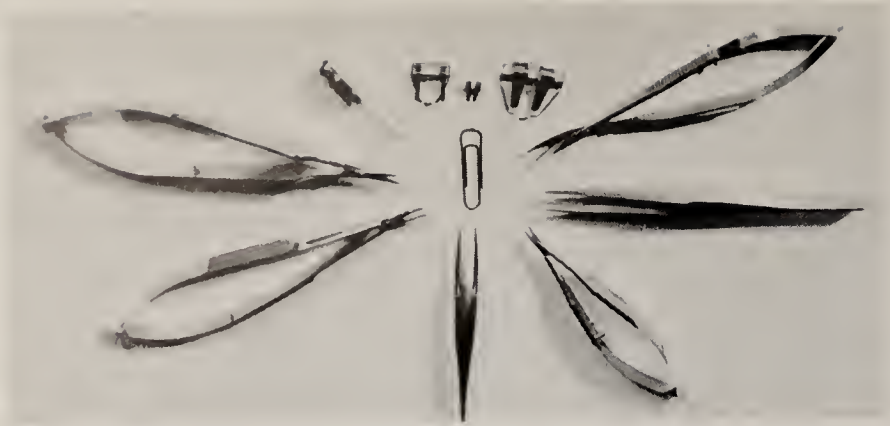
Microsurgery expands the surgeon's options and abilities and improves his results, often dra-

matically. It can mend bodies that might otherwise be hopelessly damaged. It can give back what disease, aging or accidents have taken away. In the process, it may heal broken spirits as well, by offering new hope—hope in the form of a second chance to live a "normal" life.

What is microsurgery? Very simply, it is surgery performed under a microscope. But the surgery is not simple and the microscope used is no ordinary tool. In fact, while microscopes have been used in some surgery with limited success since the 1920s, the modern operating microscope with its attendant maneuverability and superior optics, has been in existence only since the late 1960s. Out of this tool has grown a new brand of surgery that can repair the body's tiniest structures.

Peering into an open wound through an operating microscope is not unlike entering the world of *The Fantastic Voyage*. At 20 power (20X) magnification—the range commonly used for microsurgical suturing—the microsurgeon scrutinizes an area no larger than a postage stamp. During replantation surgery, as in Tom Phillips' case, what to the naked eye looks like a bloody, mangled finger, under the microscope is a labyrinth of blood vessels, tendons and nerves. The view is brilliantly lit, in living color, and three-dimensional. It is this kind of detail that makes microsurgery possible.

Like all surgeons, the microsurgeon is only as good as his eyes and hands. But the microscope becomes his eyes, zooming in and out, focusing and refocusing, to see where no ordinary man can. And tiny instruments—



Microsurgical instruments (paper clip shows scale)

microinstruments—probe and stitch where his own hands are too cumbersome to go.

In his left hand, the microsurgeon holds a forceps—ordinary but for the fact that its tongs are as small and sharp as pinpoints. In the right hand, a needle holder grasps a tiny needle, 70 microns (70/1000 of a millimeter) in diameter—about the breadth of a baby's eyelash. The thread is attached directly to the needle and is finer than the finest human hair.

Using these tools in a highly magnified field, the microsurgeon can repair a multitude of formerly irreparable structures—damaged nerves, severed ten-

dons, broken veins and arteries. He can rebuild faces ravaged by cancer, reattach fingers severed in accidents, unfreeze paralyzed faces, prevent strokes, reverse vasectomies. The microsurgeon can implant artificial lenses to restore sight, repair broken eardrums to restore hearing, repair undescended testicles and blocked fallopian tubes to restore fertility.

With the aid of a laser beam, he can find and remove minute particles of tumor embedded deep in the brain or on the surface of the fragile larynx, without damage to the surrounding tissue.

At Rush-Presbyterian-St. Luke's

Medical Center, pioneering work using microsurgery is being done in plastic and reconstructive surgery, particularly hand surgery, and in neurosurgery for treatment of stroke and brain tumors.

Microsurgery is being used more and more frequently in gynecology and urology, in addition to its extensive and longstanding use in ophthalmology and ear, nose and throat surgery.

Research is under way in the Microsurgery Laboratory to determine why various complications arise following microsurgery and to develop new techniques to improve results and shorten the time required for surgery.



Anastomosis—artery is one millimeter in diameter.

"The greatest change in plastic and reconstructive surgery in the last ten years has been the application of microvascular-surgical technique."

—John W. Curtin, M.D.

The most dramatic results in microsurgery are in plastic and reconstructive surgery.

A face that has been literally carved out by radical cancer surgery can be reconstructed immediately following surgery instead of months later, as has been the case in the past. Partially or totally severed fingers, hands and limbs can be reattached rather than amputated, and some types of facial paralysis can be corrected with microsurgery. John W. Curtin, M.D., is Chairman of the Department of Plastic and Reconstructive Surgery at Rush-Presbyterian-St. Luke's Medical Center.

"The greatest change in plastic and reconstructive surgery in the last ten years has been the application of microvascular-surgical technique," says Dr. Curtin.

Plastic and reconstructive surgery is by definition repair work. Patients who undergo such procedures—because of a severe accident, disease or congenital defect—have been denied the luxury of an ordinary life. Through surgery, they seek a better quality of life—adequate function, a more normal appearance and a healthier, happier mental attitude.

Repair is accomplished in a number of ways: through plastic implants, the use of prostheses, grafts, and the transfer of sections of living tissue called "flaps." Flap transfer has been revolutionized by the application of microsurgery.

Conventional flap transfer—developed during World War II to treat massive war injuries—involves a series of steps (called delays) to coax the tissue sections to grow in a new place.

Free flap transfer, using microsurgery, accomplishes the same end in one step.

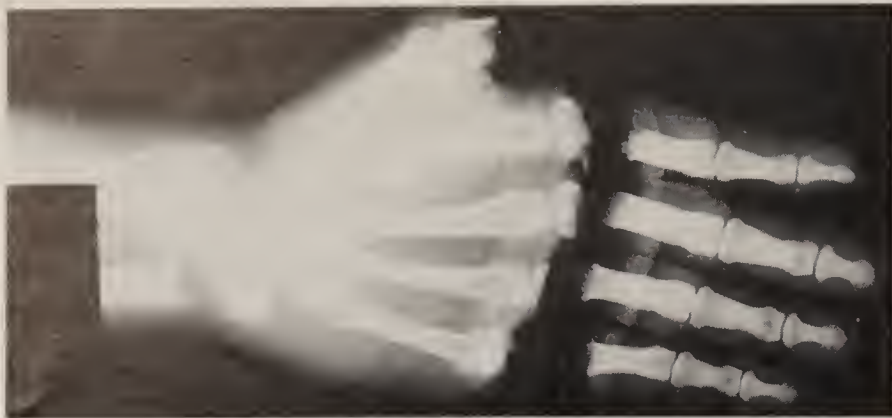
"Patients used to be in the hospital for months," says Dr. Curtin, "but free flap transfer eliminates the delays. There's less time involved, hence less expense through hospitalization."

No doubt the speedier procedure keeps the patient's morale high, and that aids recovery as well.

Free flap transfer is done under the microscope using miniscule sutures. The flap is carefully excised and its tiny veins and arteries are identified and attached to matching veins and arteries at the grafting site. The procedure is called *anastomosis*, or reattachment of severed hollow organs such as blood vessels. Blood flow to the transplanted tissue is established immediately.



John W. Curtin, M.D., performs reconstructive surgery.



Thumb, index and long fingers were replanted in this case and survived.

Cancer patients in particular benefit from improved flap transfer technique since head and neck cancer may involve removal of the larynx, the esophagus, the soft and/or hard palate, the lips, or large sections of the cheek and jaw. Free flaps of skin and soft tissue can be used to reconstruct the mouth, rebuild an esophagus, or repair a gutted face. The patient is made whole again, immediately.

"In the past, extirpation wasn't as complete as it could be," notes Dr. Curtin. "It was the practice of many oncology surgeons to leave the wound of the head and neck cancer patient open for approximately a year to be sure there was no recurrence of the cancer."

Such a situation could be devastating to the patient's morale. "There has been a very high incidence of suicides among these patients," says Dr. Curtin.

At Rush-Presbyterian-St. Luke's Medical Center, plastic surgeons work in teams with general or ear, nose and throat surgeons. Surgery and reconstruction is planned jointly, anticipating the maximum excision and repair. Dr. Curtin has supervised approximately a dozen head and neck cancer operations using free flap transfer. Such an operation is a grueling undertaking lasting up to 10 to 16 hours.

"Sometimes specialists will compete for these cases," notes Dr. Curtin, "but here at Rush you see an ideal cooperative effort."

Microsurgery also makes possible treatment of some types of partial facial paralysis.

A patient with paralysis of half

the face—whether because of a congenital defect, an injury or tumor—looks lopsided. He or she has trouble with speech and with tearing of the eyes, may have difficulty eating, and probably drools.

In some cases, a nerve transfer graft, performed microsurgically, can alleviate the problems. Taking advantage of the fact that one side of the body can activate the other, a graft is attached to a functioning nerve on the animated side of the face and run beneath the skin under the mouth or nose to the other (paralyzed) side. The graft is usually taken from the sural nerve in the back of the leg where loss of some sensation isn't critical.

"Paralysis may not seem very serious, but to these people it is," says Dr. Curtin. "Our face is our window on the world, it's how we judge others and how they judge us. Our face is the expression of who we are. It's important that facial function be restored!"

Although we may take them more for granted, our hands also are an expression of who we are, and they may benefit tremendously from microsurgery.

"Aside from our larger brain, what really makes us different from animals," asks Dr. Schenck, "but the use of our hands?"

"The most important function of a human hand is the ability to touch a thumb to a finger. Because of that man can invent, can use tools, can achieve in so many ways." Dr. Schenck is the Director of the Section of Hand Surgery in the Departments of Plastic and Reconstructive Surgery and of Orthopedic Surgery. A member of the International Society of Reconstructive Microsurgery, he is recognized as one of the top microsurgeons in the world.

Because the structures involved in hand surgery are so delicate (the hand contains more bones than any other part of the body), in the past certain disabili-

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Robert Schenck, M.D., checks thumb flexibility of a replant patient.

Mastering the Art

First he must master the techniques on tiny plastic tubing the size of a pencil lead. Then he practices on the femoral arteries of laboratory rats—equally small and even more delicate.

The needle is so miniscule it can only be picked up properly under the microscope—its four square sides are impossible to distinguish with the naked eye. And so the first lesson begins: the surgeon is taught he must always use the microscope as his eyes in microsurgery.

Microsurgery is learned in a laboratory. And practiced and practiced, several hours a day for a month or more before the skills are sufficiently polished and confidence is achieved for the operating room. Like athletes, microsurgeons know the importance of practice. Once accomplished, they don't hesitate to return to the lab for more practice if there has been a lull in microsurgical cases or prior to a particularly difficult procedure. Only continued use of their skills will maintain their dexterity.

Their trainer is Harry Weinrib, Ph.D., a Russian-born and educated physicist and sport medicine specialist. Dr. Weinrib teaches microsurgical techniques and runs the Microsurgery Laboratory at Rush-Presbyterian-St. Luke's Medical Center. One of the few multidisciplinary microsurgery labs in the country, it was established by Dr. Schenck as a facility for training and research in microsurgical techniques and technology.

A committee of interested at-

Author Reed learns first-hand the need for training and dexterity ...and more training...to master art of microsurgery.



Robert Chesney, F.R.C.S., practices anastomosis under the direction of Harry Weinrib, Ph.D., while Fellow Buhman Sadr, F.R.C.S., looks on.

tending physicians along with Dr. Schenck oversees the lab's operation. It is equipped with one manual microscope, all the necessary microsurgical instruments, and numerous rats. The committee is currently negotiating the purchase of a second microscope to expand the lab's capabilities.

According to Dr. Weinrib, patience and concentration are the key attributes of a successful microsurgeon. The work is painstaking and tedious; it demands tremendous concentration. A highly skilled microsurgeon may spend a half hour anastomosing one artery; the same procedure may take a beginner several hours in Dr. Weinrib's laboratory.

Anastomosis is the microsurgeon's basic skill: it is the surgical attachment or reattachment of a

variety of hollow organs. Anastomosis is learned and mastered in the Microsurgery Laboratory using rats whose femoral artery is similar in size to the smaller organs of the human body—veins, arteries, tendons and nerves of the hand, blood vessels in and around the brain, facial nerves, and the fallopian and vas deferens tubes of the reproductive system.

It takes most physicians about a month to master anastomosis, says Dr. Weinrib. He practices on rats at least twice a week to maintain his own proficiency.

What is it like to operate on an area the size of a postage stamp? What is it like to teach aspiring microsurgeons?

I asked Dr. Weinrib if I could observe someone in training, preferably a beginner.

"Have a seat and I'll show you how it's done," he instructed. Suddenly I was the pupil.

Rummaging through a drawer, he pulled out a piece of Silastic tubing 4 inches long and about the diameter of the tip of a ball-point pen. He clamped it under the microscope and snipped it in the middle.

"Now you will sew it back together," he announced. I had no idea then that I would never complete the job, but surrender to exhaustion three stitches and 90 minutes later.

With the severed tubing under 25 power (25X) magnification, the job looked easy enough. But that was before I tried to pick up my needle.

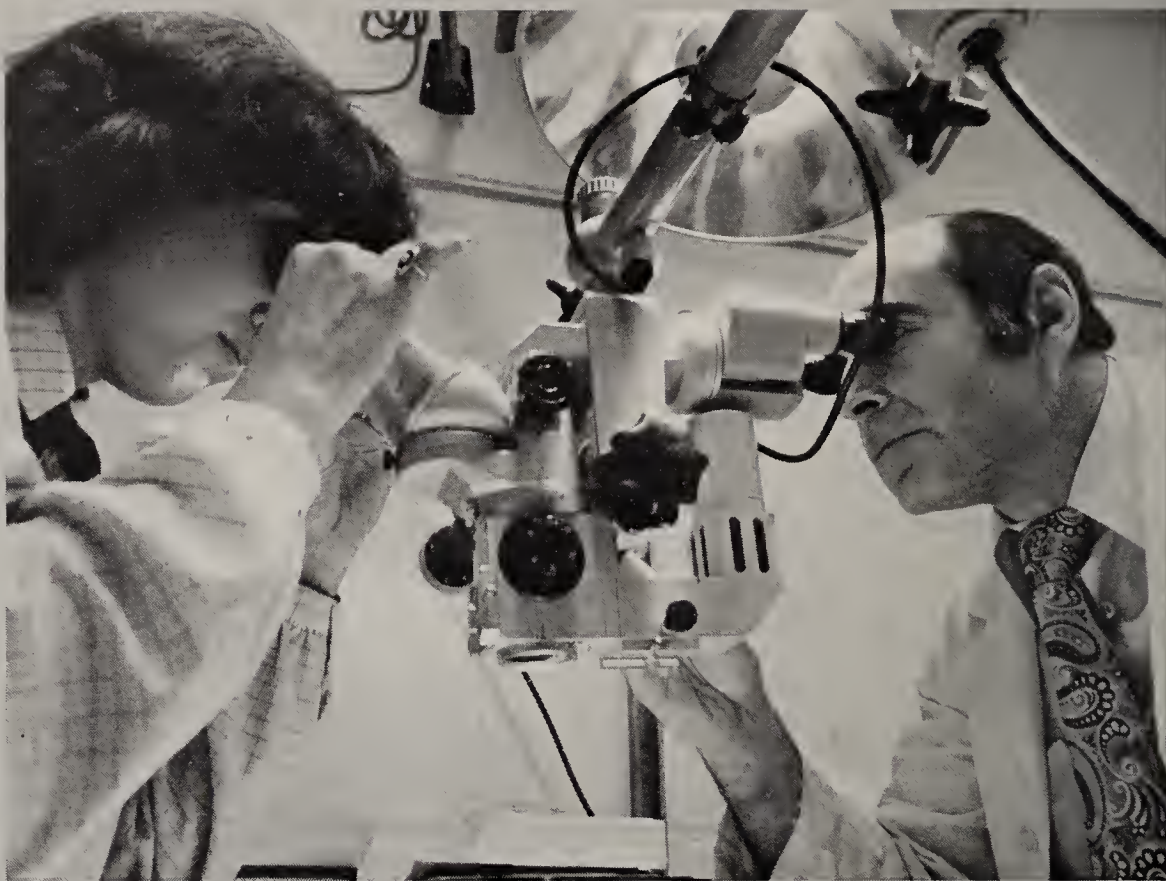
Like any hand surgeon, I was given gossamer-fine 10-0 nylon thread. Either blue or black in color, it seems to disappear when it's not lying on a white background. The curved steel needle attached to the thread is equally delicate. With a needle holder in my right hand and my eyes pressed to the binocular eyepieces, I attempted to pick it up. After several misses, I finally grasped the needle only to be told it was upside down.

Dr. Weinrib sat directly across from me, following my efforts thru the microscope's second set of lenses.

"Try again."

I did. If my hand moved only an inch, the needle holder was jolted out of the microscope's field. In microsurgery, a flick of the fingers is a leap out of range, and a tremor of the hand looks like palsy. Again and again I picked up the needle only to drop it or to find it upside down or backwards.

Several times Dr. Weinrib picked up the needle properly



The author prepares to try anastomosis using the microscope.

and handed it to me in the holder. But because I could not feel the needle, I never knew how tightly to hold on. I dropped it repeatedly, then finally grasped so hard that when I began to try to stitch, my hand shook uncontrollably. I ripped the tubing.

Dr. Weinrib trimmed the ragged edge and had me start over.

Microsurgical suturing actually takes two hands. The needle, grasped in the needle holder in one's right hand, is assisted by a forceps in the left hand (assuming the surgeon is right-handed; many are ambidextrous). To begin, the forceps, with jaws slightly open, is carefully inserted into the right half of the severed tubing to dilate it ever so slightly. The needle is then inserted through the top tubing wall into the jaws of the forceps which close and draw the needle out.

After several misses, I accom-

plished this. I put down my microinstruments and heaved a sigh of satisfaction and relief.

"But now you must do the other side," Dr. Weinrib chided. Acknowledging I was only half done, I picked up my needle holder and forceps, wrestled several minutes with the miniscule needle and finally began the procedure again.

Angling awkwardly with the forceps (since I was now coming at it from the opposite side), I once again inserted the tips to dilate the tubing, then pushed a shaky needle into the tube's side. This step, using the forceps to dilate the tube (or artery) walls is imperative—to avoid sewing opposite walls together.

Grasping the needle with my forceps, I pulled it all the way through, and pulled and pulled on what seemed to be an interminably long thread (actually about

four inches), until only a short tail remained on the right side.

Success.

Now if Dr. Weinrib would just put a knot in it, the stitch would be complete and I could go to lunch.

Using his own forceps, Dr. Weinrib tugged on the tail a bit, to make it longer. "Now let's tie a knot!"

"Couldn't you do it?" I ventured.

"Oh no," he assured me, "you can do it."

There was something in his voice that would not let me quit. He seemed quite certain I could accomplish this relatively minor task. I picked up the microinstruments once again.

As if reading my mind, Dr. Weinrib wielded the needle holder

deftly to demonstrate how to loop the thread around the forceps and pull the short tail through to complete the first throw of the knot. Depending upon where the knot is located, the procedure is repeated one or two more times.

Skillful knot-tying is one of the most important techniques to master in microsurgery. The knot must hold; it must be neither too tight nor too loose. With such tiny instruments, tension cannot be determined by feel, only by sight. The surgeon will usually zoom up to maximum magnification (40X) to check his knot tension. The knot also must lie flat and be squared. Good knots can make the difference between an anastomosis that succeeds and one that fails. A knot too loose

will leak; a knot too tight may cause clotting or scar tissue to form.

In microsurgery there are no degrees of success or failure. Either the anastomosis works or it doesn't.

Knot-tying involves more movement than stitching. Yet I was amazed to discover how little hand motion is needed to loop the thread around the forceps. Once encircled, the forceps' jaws are opened ever so slightly to grasp the short tail and pull it through. Dr. Weinrib adjusted the magnification so I could see the stitch tension more closely. I pulled just hard enough to bring the two edges of tubing together. The exercise was then repeated. I had a knot.



Simply picking up microsurgery needle calls for steadiness and concentration.

Dr. Weinrib clipped the ends of the thread. "You have succeeded," he declared with a touch of pride in his voice.

Forty-five minutes had elapsed. I was ready to quit.

"Let's do another," he suggested, almost gleefully. I wanted to protest, yet I agreed without a word. I was too embarrassed to give up now.

During the ensuing 45 minutes we sewed two more stitches. I say we, because, while I was more proficient on my second stitch, by the third, Dr. Weinrib was assisting with the forceps while I struggled to control just the needle holder. I was tired, my head throbbed, I was hungry and my hands were shaking from the tension of grasping the needle holder too tight. Dr. Weinrib tied the last throw of the third knot. By that time the thread had become kinked and uncontrollable.

Then I trimmed all three knots with a tiny scissors and Dr. Weinrib took photographs of my handiwork. On closer inspection the tubing was poorly aligned. Were it a real vessel it undoubtedly would have leaked profusely.

Ninety minutes behind the operating microscope is a fraction of the time it takes even the quickest student to master this art called microsurgery. Dr. Weinrib told me of a pair of microsurgeons from Milwaukee who rent the lab on Fridays. One spent five months travelling to Chicago once a week to work eight to ten hours on the rats. He is now doing brain bypass surgery successfully. Now a second physician is alternating with him on a biweekly basis.

"I'd taken courses around the country, but the difference here is the individuality of instruction," says Robert Steiner, M.D., a neu-

rosurgeon from Milwaukee's Columbia Hospital. The doctors rent the lab for the entire day they work here. "Harry stays with you all day, and after about ten eight-hour days, you realize how good he is and how good you're not. He knows everything there is to know.

"I never get tired when I'm doing it, but when I walk out the door at 5 p.m., I'm beat."

In an average day Dr. Steiner will do just four practice anastomoses on the rats. "I'm never sure who has really had the more difficult day: me, Harry or the rats!

"It's something akin to trying to sew together two pieces of wet Kleenex with a railroad spike."

But what miracles can be wrought with that so-called "railroad spike"—when you've mastered the art of microsurgery!



Dr. Weinrib instructs residents and Fellows in basic microsurgical techniques.

“Replantation of severed parts has been desired for centuries; but it has only been through the more recent application of microsurgery that replantation has become a consistent clinical possibility.”

—Robert Schenck, M.D.

(continued from page 9)

ties were simply untreatable and severe hand or arm injuries could be treated only by amputation. Microsurgery has changed that however: damaged nerves and tendons can be repaired or even replaced; severed veins and arteries can be reattached; in some cases, entire portions of injured muscle can be replaced to salvage a mangled limb; and replantation of severed fingers, hands and even arms is possible.

“Replantation of severed parts has been desired for centuries,” observes Dr. Schenck, “but it has only been through the more recent application of microsurgery that replantation has become a consistent clinical possibility.” Dr. Schenck has been replanting fingers, hands and arms since 1973.

Success is measured in terms of sensation and function and is determined not only by the skill of the physician but by several other factors: the nature of the injury (a sharp cut, an avulsion—a tear or twisting injury—or a crush, and whether or not the amputation is total); extent and location of the injury; and how soon the patient arrives in surgery. Success is more likely the smaller the part involved.

Dr. Curtin says that the general public’s understanding of this type of injury is also a factor. “The lay press has kept people informed about these types of injuries. People know replantation can be done in some cases. They know they’re supposed to wrap the injury and pack it with ice. This makes replantation more successful—when it’s handled properly from the beginning.”

What happens in replantation? Basically, the surgeon must put the pieces back together again. The primary technique he uses to accomplish this is anastomosis, because the damage is so extensive and so many blood vessels, tendons and nerves are involved. A replant operation can last 12 hours or more. And so much can go wrong so easily.

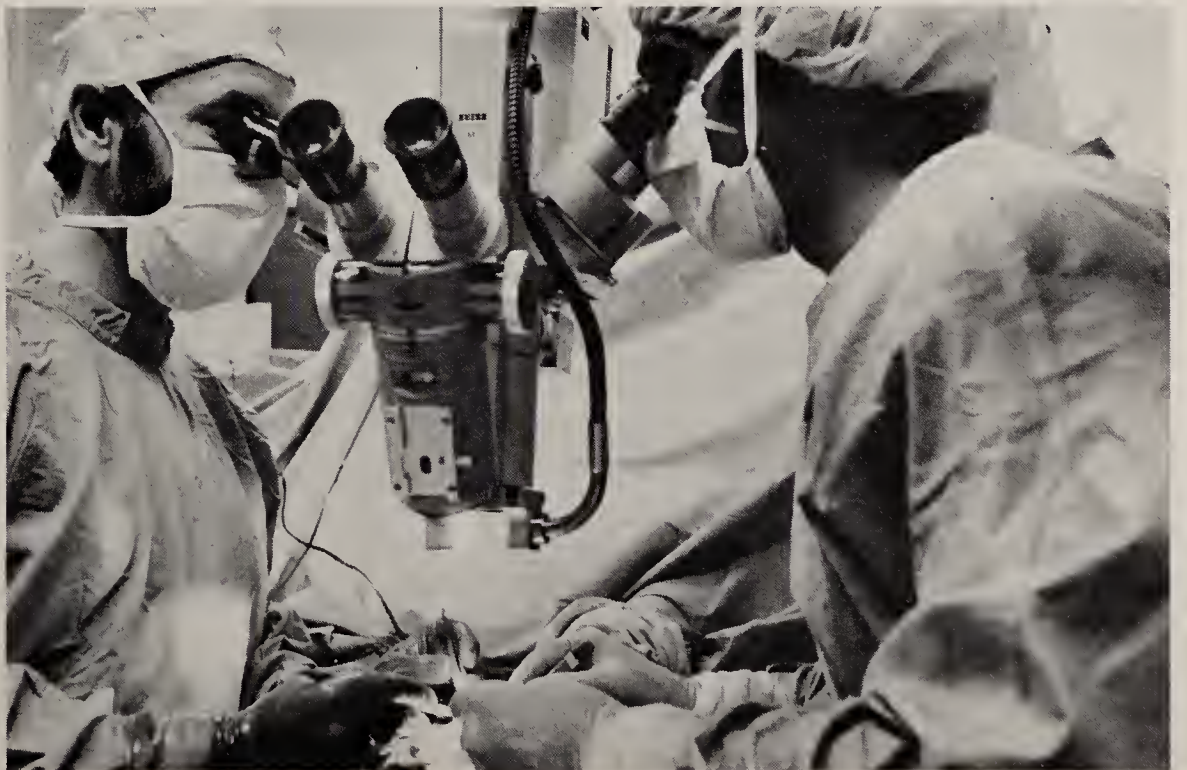
For example, in a finger replant, if only one vein and one artery can be found for repair, and one of them clots after the operation is over, the digit will die. “You can’t just go home if it doesn’t work, no matter how long you’ve been in the OR,” observes Dr. Schenck. “I’ve had times when I’ve gone all night and thought we were done at 7 a.m. Then a vein clots and we have to reopen the wound and reanastomose the vein. We actually get done at noon.”

Before surgery it may take several hours to assess the damage and then to identify all the severed parts and clean up the

damaged ends of vessels, nerves and tendons. Dr. Schenck is assisted by two Fellows in hand surgery—doctors who already have completed residencies in orthopedic or plastic surgery. In the case of a large or extensive injury, i.e. a forearm or multiple digits, he will call in an additional plastic surgical resident to round out two two-man teams—one to work on the injury site while the other manages the severed part(s).

The surgeon works from the inside out. First, bones are realigned and attached with pins. Then the microscope is brought in and anastomosis begins.

Veins and arteries are reattached first. When avulsion or crush injuries have caused extensive damage to the vessels, grafts (usually from the forearm) are inserted. The grafts must be carefully chosen to match the size of the vessels they will be attached to. In a finger reattachment, Dr. Schenck repairs a minimum of two arteries and one vein,



Dr. Schenck and hand surgery Fellow.



Simple ear operation using microsurgery.

with at least eight sutures at each anastomotic site.

Anastomosis is done at 20X-40X magnification. Under the microscope, an empty artery looks like a milky white tube and appears to have the sticky consistency of a jellyfish. Stitching with the miniscule needle and suture, the surgeon must be careful not to sew opposite sides of the vessel together. Alignment must be accurate, with no twisting of the vessels, and the knots must have precisely the right tension. Too much tension may cause clots, while stitches too loose will leak. Dr. Schenck zooms up to 40X magnification to check suture tension. Each anastomosis takes approximately 30 minutes. By the time three to five veins and arteries are reattached, several more hours have elapsed.

Tendons and nerves are similarly anastomosed. Again, if there is considerable damage, grafts must be taken (from the arm or a neighboring finger) and inserted to achieve the proper length.

Following anastomosis, the digit, hand or arm is closed up and bandaged. A single digit replantation usually takes 4 to 12 hours, barring any complications. To avoid clotting, the repaired part must then be kept elevated and the patient is put on anticoagulant drugs and observed for ten days.

"When the operation is complete, the chances for success are roughly 50 to 90 percent," says Dr. Schenck, "but until ten days are up, we really don't know if the replant will take. If it survives for ten days, the chances are great

that the replant will survive."

Function and sensation don't return immediately. Tendons take 3 to 5 weeks to heal, while the bone takes 8 to 12 weeks, and the nerves regenerate at about one inch per month. It can take as long as 5 or 6 months for sensation and movement to be restored in a replanted finger. And, Dr. Schenck cautions, the replant is never as good as the original.

But few people will refuse replant surgery on that basis. Says one patient, whose forearm was severed by a paper cutter, "When it happened, all I could think was 'save the arm—don't let it get away.' I had read somewhere about replantation and I knew it could be done. My arm is shorter now and doesn't look at all like the other, but I'm glad I have it. I'd rather have it than not."

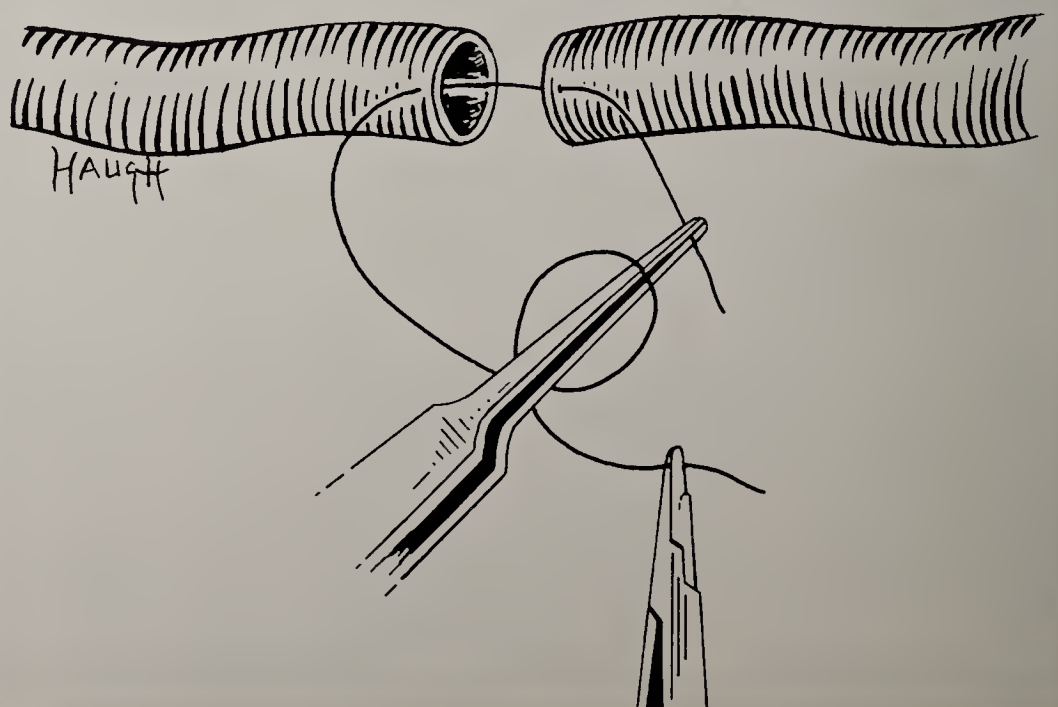
Adds another patient whose hand injury has required several operations to replace palm tissue and to repair damaged tendons and nerves, "You've got to be a

whole person, and you're not without your hand. Sometimes I get depressed thinking about it: so much for one damn hand. But it's worth it. I want to be able to work again."

Replantation isn't the only application for hand microsurgery. Toe-to-thumb transfers for amputees are done with a high rate of success. One of Dr. Schenck's patients, who had lost his thumb and first two fingers can now use his new "thoe" to wield a hammer and carry heavy buckets.

"What can you do with just some fingers?" asks Richard Sweedler, a 35-year-old corn and soybean farmer. "It was elective surgery for me, but it was something that needed to be done. You don't realize it until you lose that thumb, but almost everything you do is done with a fist. And you need that thumb to make it."

Transplantation of living muscle tissue (myocutaneous flaps) is also possible through microsurgery. Extensive muscle damage,



Knot-tying during anastomosis

"Limb replantation still involves some of the worst results along with some of the best. Few laymen understand that replantation of large limbs is still 'frontier surgery.'"
—Robert Schenck, M.D.

Following amputation of his thumb, the patient's big toe is attached in its place. This "thoe" functions as a thumb.

seen in mutilation-type injuries, can be repaired in this manner.

In 1976, Dr. Schenck pioneered the transplantation of the *rectus femoris muscle* (a thigh muscle) to the forearm. Until that time, the procedure had been tried only experimentally in dogs.

The patient was a 49-year-old man whose right forearm had been mangled in a milling machine. Rather than amputate the arm or simply close up the wound, leaving the arm nonfunctional, Dr. Schenck transplanted a leg muscle. Says Dr. Schenck, "The rectus femoris muscle is a good muscle to use in the forearm since there is no loss of function in the leg from its removal, and it is the proper length and size for the forearm."

Three months after the 14-hour operation, an arteriogram showed good blood flow throughout the transplant. Today the patient can perform supportive functions with the arm, such as unscrewing the lid of a jar.

"The operation proved it was feasible, but only further experience with it will determine the ultimate value of the method," says Dr. Schenck.

While the success rate nationwide for digit replants and certain kinds of hand repair work is good, success is much less predictable in any procedure involving the limbs or a portion of them. Chinese physicians, who pioneered replantation operations in the mid-1960s claim a limb replant success rate as high as 70 percent, but according to Dr. Schenck, "It (limb replantation) still involves some of the



worst results, along with some of the best. Few laymen understand that replantation of large limbs is still 'frontier surgery.'"

However, Dr. Schenck predicts that replant success will continue to improve as more microsurgons are trained, as techniques improve and as new ways to minimize postoperative complications are found. Dr. Schenck trains two Fellows in hand surgery each year. Special emphasis is given to the use of microsurgery. In addition to assisting Dr. Schenck in surgery, the Fellows work in the Microsurgery Laboratory several days a week, conducting research projects and practicing microsurgical techniques on rats.

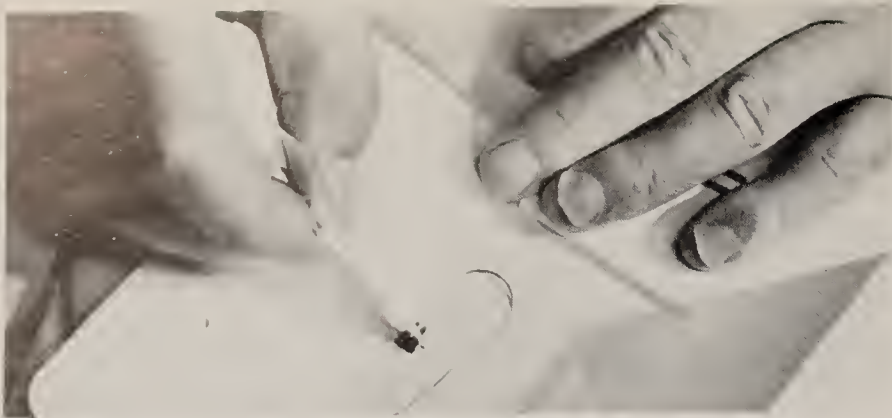
Several research projects are under way in the Microsurgery Laboratory. Dr. Schenck and the hand surgery Fellows have been studying patency rates primarily. Patency is the measure of anastomosis success. If a vessel is patent, there is no blockage from

clots, only minimal leakage at the anastomosis site, and the surgery will likely be successful.

In one study, reported by Dr. Schenck at the Fifth International Symposium on Microsurgery at Guarujá, Brazil, the effects of preoperative angiography were examined. Angiography is the X-ray study of circulation using radioactive dye injected into the veins and arteries. Results showed that some damage to vessel tissue can be caused by angiography which could cause clotting to occur later. Dr. Schenck concluded that preoperative angiography should only be used when absolutely necessary.

In another study, various irrigating solutions were being examined and rated for their effect on patency. This and similar ongoing research is performed in the lab using rats.

In clinical research, a six-year study comparing replant-revascularized patients and amputees appears to indicate that amputees



Standard surgical needle (right) and microsurgeal needles (left).



Dr. Schenck picks up a microsurgeal needle during a replant operation.

don't return to work as quickly as patients who've undergone microsurgeal replantation or repair work. The findings, when complete, would bolster the case for more effort in the area of replantation.

Laboratory supervisor Harry Weinrib, Ph.D., is developing a sutureless technique with Dr. Schenck which could cut considerably the amount of time spent in anastomosis. Dr. Weinrib also has developed a special clamp called the *vas approximator* which will improve alignment of the vas deferens in vasectomy reversal procedures.

Microsurgery's application to plastic and reconstructive surgery continues to make headlines. Replants are termed "miracles" and the microsurgeons who per-

form them are "miracle-workers."

But it didn't begin with replantation, free flap transfers and "thoes." In fact, these are relatively recent applications of microsurgeal techniques which would not be possible were it not for the pioneering work done in other fields.

Microsurgery began in otolaryngology. In the 1920s, a Swedish otolaryngologist, Carl-Olof Nylen, used the dissecting microscope in repairing certain ear disorders. But the microscope was bulky and awkward to use; in the United States, the Depression and World War II kept further developments minimal. Most ear surgeons continued to use loupes, special surgical glasses that could magnify up to six power (6X). According to

David Caldarelli, M.D., Chairman of the Department of Otolaryngology and Bronchoesophagology at Rush-Presbyterian-St. Luke's Medical Center, the microscope wasn't used extensively in surgery until after World War II.

"Many ear disorders were handled surgically in the late 1940s and early '50s," notes Dr. Caldarelli. "Ironically, just as the modern operating microscope was being perfected for otolaryngology, antibiotics came on the scene and eliminated the need for much ear surgery."

But with the advancing technology, otolaryngologists discovered that previously incurable conditions, especially those related to hearing loss, were in fact operable with microsurgery. It is estimated that up to six percent of the population suffers from chronic middle ear disorders that can be corrected by microsurgical transplantation.

"We're talking about structures 2, 3, 4 millimeters long—you just couldn't do anything with them without the microscope," says Dr. Caldarelli. He estimates he uses microsurgery for half of all his cases, and in virtually all ear surgery.

Otosclerosis is one of the more common middle ear disorders causing deafness. A gradual depositing of new bone on the stapes (the tiniest bone in the body, located just behind the ear drum) renders it useless for carrying sound to the inner ear. In the past, there was no cure for otosclerosis. Now, with microsurgery, the damaged stapes can be removed and replaced with either a bone graft or a plastic

It is estimated that up to 6 percent of the population suffers from chronic middle ear disorders that can be corrected by microsurgical transplantation.

In certain procedures, David Caldarelli, M.D., relies only on the concentrated light from his microscope (right) and the light on his instrument table—the heightened contrast enhances visibility.

bone to serve the same purpose.

Another common middle ear disorder is hearing loss from a damaged tympanic membrane (eardrum). In a 90-minute operation, the damaged eardrum is examined, prepared, and trimmed, and a graft, about the size of an infant's fingernail and looking like an onion skin, is inserted through the ear canal to the space behind the damaged eardrum. The ear chamber is then packed with gel foam, a jelly-like substance that nurtures the graft and keeps it firmly in place. Within six weeks, the gel will dissolve, the graft will take hold and hearing will be restored.

Microsurgery has other applications in otolaryngology and bronchoesophagology.

"Most recently we've been able to repair tiny blood vessels and nerves. Sinus surgery techniques have been improved, microsurgical techniques for controlling nosebleeds have been developed, and the inner ear is now accessible because the microscope provides the necessary light," says Dr. Caldarelli.

The microscope is also used in larynx cancer surgery, where injury to the vocal cords can result in the loss of one's voice.

"When the microscope is combined with the laser," says Dr. Caldarelli, "benign or malignant tumors on the larynx can be removed more completely and with



The microscope enables otolaryngologists, such as Dr. Caldarelli, to treat diseases of the middle and inner ear.



Microsurgery needles (top 2), general surgery needles (bottom 2)

Dr. Caldarelli reviews microsurgical procedure with resident.

minimal injury to the vocal cords."

For the future, Dr. Caldarelli predicts increased use of microsurgical techniques in the treatment of congenital anomalies, inner ear tumors and chronic ear deformities. "All the residents in otolaryngology/bronchoesophagology now train in microsurgery. As more surgeons work with it, more applications will be found for it. It's hard now to imagine ever working without it."

The Department of Ophthalmology at Rush-Presbyterian-St. Luke's Medical Center has five operating microscopes for use in major and minor surgery and research. The latest, the highly advanced Zeiss OMNI 6 with foot pedal zoom and focusing control, was installed in the operating room as part of the new Joseph and Helen Regenstein Eye Center grant.

"At first only corneal transplants were done using the microscope," says William E. Deutsch, M.D., Acting Chairman of the department. "Now it's used routinely in a variety of procedures, especially by the younger physicians trained in the technique. The benefit, naturally, is that the better you can see, the better you can control what's happening. You can get improved alignment and you can avoid or minimize trauma to surrounding tissue with good magnification. Also there's less scarring with such fine suturing material, which is important in eye surgery. But there's still one disadvantage: microsurgery takes longer."

A cataract operation without the microscope may take less than an hour, while with the micro-



scope it may take one-and-a-half or two hours.

The key, according to Dr. Deutsch, is to use the technique where precision is imperative and outweighs the risk of lengthy anesthesia.

"There's no doubt microsurgery has saved eyes that would have been lost," says Dr. Deutsch. "And for cataract patients, there's considerably less postoperative discomfort. The patient recovers more quickly, can be fitted for glasses sooner, and can return to work earlier."

Microsurgery enables some cataract patients to avoid glasses altogether. A plastic lens can be implanted to replace the cataract-clouded lens that is removed. The implant is anchored to the iris with four stitches, at the top and bottom and on each side. Correct placement is extremely important, to hold the lens properly in place. Once the eye is healed, only the iris' slightly square appearance gives any clue that something is changed in the eye.

According to Dr. Deutsch, the intraocular lens implant is becoming a more common way of handling cataracts, especially if the patient is handicapped and can't use contact lenses, where there is only one cataract present (and therefore correction with glasses is intolerable), or where there is certain retinal disease.

Glaucoma is one of the four leading causes of blindness in this country. It's a degenerative disease in which increasing pressure on the optic nerve (intraocular pressure) ultimately leads to blindness. While there is no cure for glaucoma, the disease is commonly controlled with drugs to relieve the pressure.

However, a microsurgical procedure called a trabeculectomy affords the same result without the use of drugs. The operation involves excising the tiny trabecula, which is a part of the eye's drainage mechanism. Failure of the trabecula to function properly is thought to be a key factor in increased intraocular pressure. Its removal allows ocular fluid to

*"We have not yet reached the full potential of microsurgery of the eye. Radical eye surgery is just now in its infancy."
—William E. Deutsch, M.D.*

Intraocular lens implant

bypass the trouble spot thus easing pressure on the optic nerve.

"Microsurgical results in glaucoma treatment are good, but still not as good as we'd like," notes Dr. Deutsch. "More work with the operating microscope should improve the results. The same goes for intraocular tumors.

"We have not yet reached the full potential of microsurgery of the eye. Radical eye surgery is just now in its infancy, but is one area that should move forward as more ophthalmologists use the operating microscope."

The most recent application of microsurgery has been in the reproductive system, to restore fertility.

The reproductive system presents multiple challenges for the surgeon. Not only are the tubes (fallopian in the female, vas deferens in the male) delicate—1 to 2 mm in diameter—but unlike blood vessels, they are not simply conduits. Their inner structures *propel* the contents along (sperm in the male, the egg in the female). For surgical intervention to be successful, these inner structures must not be damaged during anastomosis.

Gynecologists in the Section of Endocrinology and Infertility have been reversing tubal ligations and eliminating tubal blockages using microsurgery since 1977. In certain cases of ligation, the success rate (measured in terms of resulting pregnancies) can be as high as 70 percent.

Shahid Ekbal, M.D., Assistant Professor, Department of Urology, has been reversing vasectomies since 1972. For several years, he operated using only magnifying loupes and correspondingly large-



er sutures. But after practicing on rats in the Microsurgery Laboratory in 1978, he began using microsurgery in vasectomy reversals.

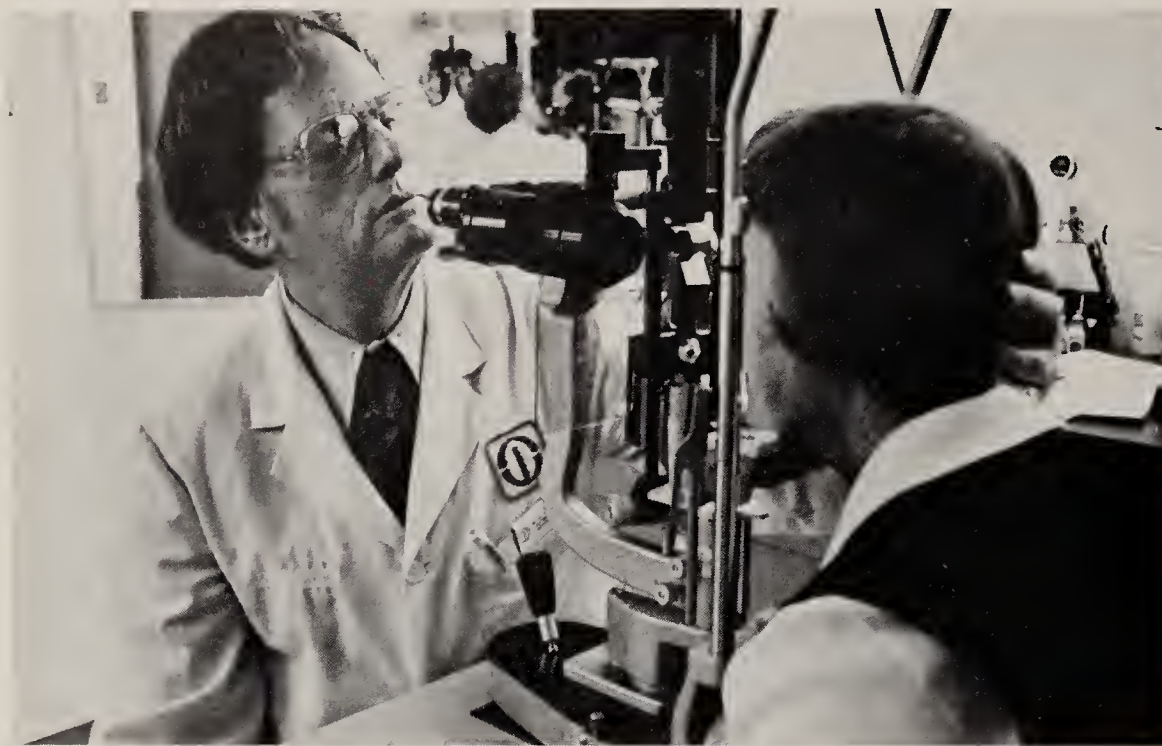
According to Dr. Ekbal, as vasectomy has become a more popular birth control procedure, there have been increasing num-

bers of men who want reversals later. Divorce, the death of a child, or an unexpected late marriage may result in the desire to reverse a vasectomy.

Not all vasectomy patients are suitable reversal patients. "You have to choose carefully. For example, it is better if the patient



Using the laser in brain surgery



William E. Deutsch, M.D., examines a cataract patient.

is under 40 years old, and if less than 5 years have elapsed since the vasectomy. Also I want the patient to have a psychological exam beforehand. I think most doctors prefer it.

"Using the microscope for the operation is still not very popular among urologists," says Dr. Ekbal. "It's tedious to learn; you have to spend a lot of time in the lab to get proficient."

But the results, says Dr. Ekbal, make the difference more than worth it.

"Without microsurgery, patency results in a vasectomy reversal are about 30-40 percent. With the microscope, results can be as high as 95 percent."

Microsurgical arterial anastomosis can also be used successfully to bring down a high intra-abdominal testicle into the scrotum. An undescended testicle is a common cause of infertility. Arterial anastomosis can be carried out between the testicular artery and the epigastric artery or directly to the descending aorta.

Dr. Ekbal predicts microsurgery will pave the way for testicular transplants and repair work on the vas deferens, when damaged by disease or trauma. And he predicts it is here to stay in urology.

In gynecology, microsurgery could lead to fallopian tube trans-

plantation as a means of restoring fertility in women whose tubes have extensive scar tissue.

Walter W. Whisler, M.D., Ph.D., Chairman of the Department of Neurosurgery, is one of a handful of physicians in the United States using laser microsurgery on brain tumors.

"With the microscope you can see practically down to the cell level," says Dr. Whisler, "and with the very narrow laser beam, you can evaporate the tumor cells a few at a time, without damage to neighboring tissue."

Dr. Whisler uses the laser primarily to excise deep-seated benign tumors, though on occasion he has treated malignant tumors as well. "It's often difficult to push parts of the brain out of the way, to reach a tumor. But with the laser you avoid that; the laser can penetrate deep, between the



Shahid Ekbal, M.D.

"With the microscope you can see practically down to the cell level; and with the very narrow laser beam, you can evaporate the tumor cells a few at a time, without damage to the neighboring tissue."
—Walter W. Whisler, M.D., Ph.D.

narrow folds of the brain, and will strike only the tiny area it's focused on.

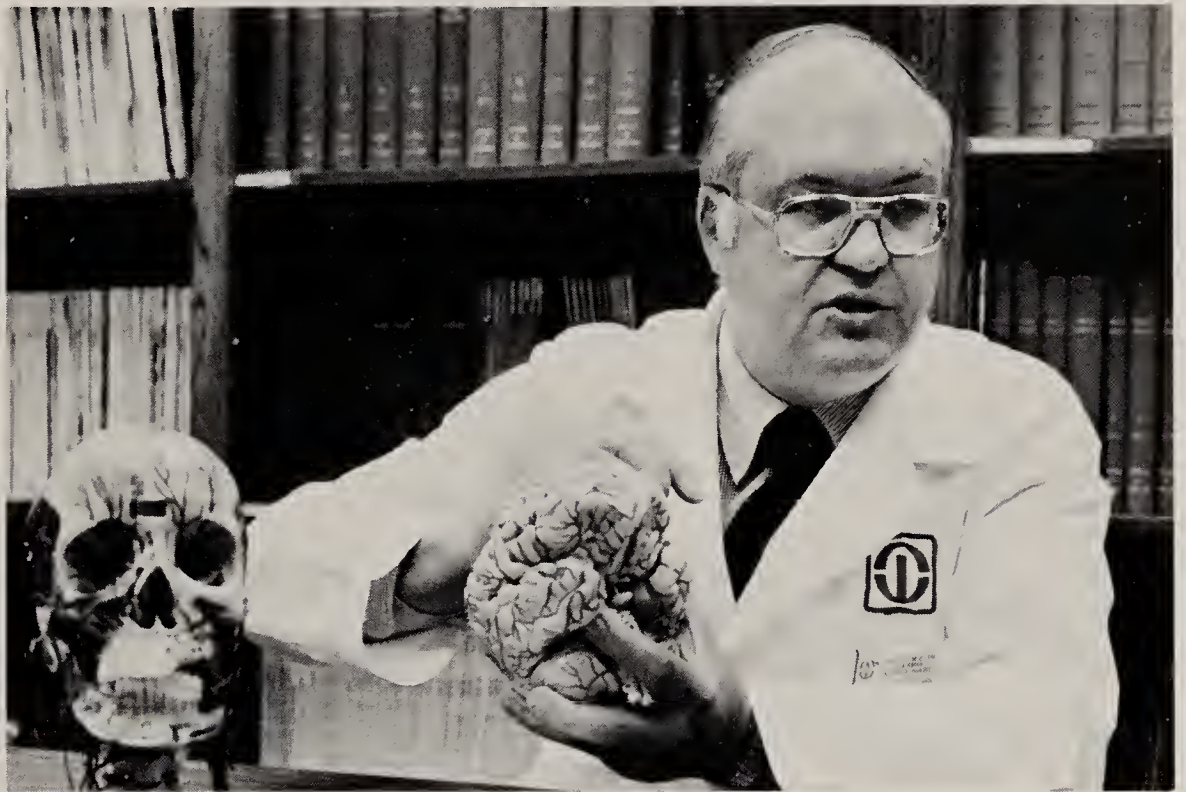
"With a benign tumor, once it is removed, the disease is cured. We've had a high rate of success with the laser, because it can penetrate so deep and is so precise." Dr. Whisler cites the example of a female patient with a benign but inoperable brain tumor who was threatened with death if it wasn't removed. Drugs had been unsuccessful.

"She had already undergone one unsuccessful operation using conventional operating techniques in another state. But when she was brought to Rush, we were able to excise the tumor with the laser. She's doing just fine now."

Use of the operating microscope in neurosurgery at Rush-Presbyterian-St. Luke's began in 1964 in the area of peripheral nerve repair. Up until that time neurosurgeons had achieved some success in nerve repair; with the microscope, however, complete success was possible.

"The microscope gives you two key advantages in nerve repair," says Dr. Whisler. "One, you can see the scar tissue or damage more clearly, so you can better prepare the nerve endings and make a graft if necessary, resulting in better healing. And two, you can align the nerve endings more accurately, for better function."

"One of my early patients was a little boy who had cut the median nerve in his wrist by putting his hand through a window. I reconnected the nerve under the microscope and a year later, he had 100 percent recovery. When examined now, there is no way to tell his median nerve had ever



Walter W. Whisler, M.D., Ph.D., uses the laser to penetrate between the folds of the brain.



With the microscope to aim and focus, the laser evaporates brain tumor cells.

been injured. That kind of recovery doesn't happen all the time—it depends on where the nerve is located and the nature of the injury—but it wouldn't even be possible without the use of the

operating microscope."

In recent years, microsurgical neurosurgery has moved beyond peripheral nerve repair to use on the brain.

The brain bypass procedure



Setting up for a cataract operation

Richard Penn, M.D., performs microsurgical spinal nerve repair.

(sometimes called brain revascularization) is a preventive measure which may be performed on patients who have had several small strokes, called transient ischemic attacks or TIAs. If the cause of the TIA is a localized area of blockage on the brain, a vein graft can be inserted to bypass the blocked area and restore full circulation, thus minimizing the chance of a future stroke. Dr. Whisler was one of the first surgeons in the Chicago area to perform this operation, in 1975.

Richard Penn, M.D., Associate Professor of Neurosurgery, also performs the operation, and he stresses that it can only be used on select patients with a small amount of localized blockage. Because the operation is so new, no long-range data exists on its effectiveness. Currently a study is under way in the United States and Canada to determine how beneficial the procedure is.

"If the study results show the operation is effective over the long run," says Dr. Penn, "you'll see widespread application of it to stroke patients."

Dr. Whisler concurs, "Community hospitals are where you'll find most of the stroke patients who would benefit from this operation. While we continue to teach the procedure, larger community hospitals will be using it more in the future rather than university-based hospitals like Rush-Presbyterian-St. Luke's Medical Center."

Microsurgical techniques have not only spawned new treatments in neurosurgery, but have greatly improved the results of older procedures. In particular, the microscope has repopularized trans-



phenoidal pituitary surgery. And in the surgical treatment of aneurysms (swelling of the blood vessels), chances for survival have increased dramatically because of the precision the microscope affords.

Transphenoidal pituitary surgery involves removal of the pituitary gland or of adenomas (gland tumors) on it. The pituitary gland regulates hormone output in the body which in turn influences growth and development. The procedure was developed at the turn of the century by Harvey Cushing, M.D., in Boston. Performed using a speculum in-

serted under the lip and through the nasal cavities (the pituitary gland is located straight back from the nose, in the middle of the head, at the base of the brain), this difficult and awkward procedure used to result in serious postoperative complications, so it lost favor with neurosurgeons. "The idea was sound," notes Charles D'Angelo, M.D., Associate Professor of Neurosurgery, "but the technology just wasn't adequate."

However, the development and refinement of the operating microscope and microsurgical instruments minimized the risks

"Some of my instruments are ten inches long; but the tips of the scalpels are so tiny you can hardly see them."
—Charles D'Angelo, M.D.

Charles D'Angelo, M.D., is one of the few neurosurgeons in the Midwest who performs transphenoidal pituitary surgery.

of complications. Dr. Whisler was one of the first physicians to try this new version of the operation in Chicago, in 1967, when Presbyterian-St. Luke's Hospital acquired its first operating microscope for neurosurgery.

Dr. Whisler's initial patients were breast cancer victims. "The spread of cancer is influenced by hormones," says Dr. Whisler. "To slow further spread, I removed the entire pituitary gland. The operation won't necessarily stop the spread of cancer, but it buys time."

While they are not common, *adenomas* or tumors on the pituitary gland can cause a variety of serious problems ranging from vision difficulty (caused by tumor growth pressing on the optic nerve), to uncontrolled lactation and cessation of the menses (caused by a prolactin-secreting tumor), or excessive growth (acromegaly). Unchecked, such tumors will kill, although they are usually benign.

"In the past, tumors of the pituitary gland were treated with radiation," says Dr. D'Angelo, one of a handful of neurosurgeons around the country who sees this condition regularly. "But radiation destroyed the gland's ability to function. The patient had to spend the rest of his or her life taking various replacement hormones: cortisone, thyroid, sex hormones."

In most cases, there is no way other than surgery to treat the tumor without damaging the gland, and safe removal can best be accomplished through transphenoidal microsurgery.

The surgery leaves no scar since it makes use of existing



body cavities. A speculum, approximately one inch in diameter at its opening, and about six inches long, is inserted just above the gum line through the maxillary sinus and the sphenoid sinus. Then a small hole must be drilled through skull bone to actually reach the gland. The microscope not only magnifies but provides light through the speculum.

"Some of my instruments are ten inches long; but the tips of the scalpels are so tiny you can hardly see them," Dr. D'Angelo says he has removed tumors that were only a few millimeters in diameter.

"It's an extremely delicate operation, but I like the challenge of it. And it's tremendously satisfying to know you've saved the gland...that the patient won't need a lifetime of hormone therapy."

Microsurgery—not one specialty, but an aggregate of technologies and skills—can be applied to nearly all medical

specialties when the disease or trauma requires precision repair of tiny, vital structures. It can save lives as in the case of tumors, but for the most part microsurgery is a restorative measure. For many, it makes life more liveable, and for the lucky ones, it is cause for celebration.

As for Tom Phillips, nine months later he could almost make a fist with his left hand; he was well enough to take a summer job landscaping; and he is back in college, having lost only one semester. And the saw that began his troubles—he has used it again to make a present for his girlfriend.

Tom understands, as Dr. Schenck has often reminded him, that his left hand will never be the same: the third finger is too short, the thumb has lost its nail, the palm is lumpy and unattractive. But the hand does work.

Life for Tom Phillips changed dramatically that day in January. But now, things are back to normal.

Ⓢ

A Week in the Life of a Microsurgeon

Wednesday, 10:00 p.m.—Robert Schenck, M.D., is reading a novel at his North Side apartment, trying to unwind from a hectic day at the hospital. He saw 20 patients in his office and performed three operations. A lengthy microsurgical procedure is scheduled for 8:00 a.m. tomorrow. The phone rings.

The caller is an orthopedic surgeon from Indiana. He has an emergency thumb replant case: a 17-year-old boy, his left thumb ripped off by a hay baling machine. While the nature of the injury is not favorable for replantation, age is in the patient's favor. He tells the caller to send the boy to Chicago.

Thursday, 12:30 a.m.—The boy has been admitted and Dr. Schenck is examining the mangled hand with hand surgery fellow Dr. John Jones, F.R.C.S. (Ed.). There is a chance the thumb can be saved though he cannot promise the patient anything. The two doctors and staff begin setting up and the long replant operation is soon under way.

Thursday, 6:30 a.m.—Dr. Schenck's eyes are pressed to the binocular lenses of the microscope while his hands manipulate a tiny forceps and needle holder in the patch of light below. Dr. Jones left half an hour ago; an orthopedic resident is assisting until the second Fellow, Dr. R. B. Chesney, F.R.C.S. (Ed.), arrives. The resident looks tired but Dr.

Schenck doesn't, although he has been operating for nearly six hours and is only about halfway through.

He sits erect on his stool, and occasionally steps forcefully on the foot pedal to zoom in and focus electronically on his suturing. Dr. Schenck is working on a vein at this point in the operation. A pin is already in place to hold the bone, and arterial flow has been reestablished.

"The first two sutures in the vessel are the most important, for proper alignment," he explains to the resident who observes through the microscope's second set of lenses while the OR staff follows on a television monitor. This is the resident's first replant operation and Dr. Schenck wants him to understand each step.

Each stitch takes several minutes to complete. It will take at least eight sutures to reconnect

the severed vessel. He will reconnect at least three vessels. Dr. Schenck maintains a steady pace, but the work is tedious.

Thursday, 8:00 a.m.—Dr. Chesney arrives and scrubs up. He takes over the vein anastomosis while Dr. Schenck takes a short break. In the scrub room, he nibbles on a chocolate bar.

Fifteen minutes later he is back in the operation. Sitting on opposite sides of the operating microscope, Dr. Schenck and Dr. Chesney decide to remove a large portion of damaged vein and replace it with vein graft from the boy's forearm.

Thursday, 11:00 a.m.—Vein, arterial and tendon anastomosis is complete. Dr. Schenck turns the operation over to Dr. Chesney, and Frank Madda, M.D., senior plastic resident, helps close the wound, while Dr. Schenck talks



Frank C. Madda, M.D., (left) and Dr. Schenck close wound after thumb replantation.

Robert Schenck, M.D.

with the patient's mother.

The replant is then dressed and elevated to prevent clotting. Dr. Schenck doesn't feel tired, so he decides to stay the day at the hospital. In the afternoon he performs a three-hour microsurgical nerve graft operation and sees patients.

Friday—The replant continues to come along nicely. Dr. Schenck sees patients and looks forward to a relaxing weekend.

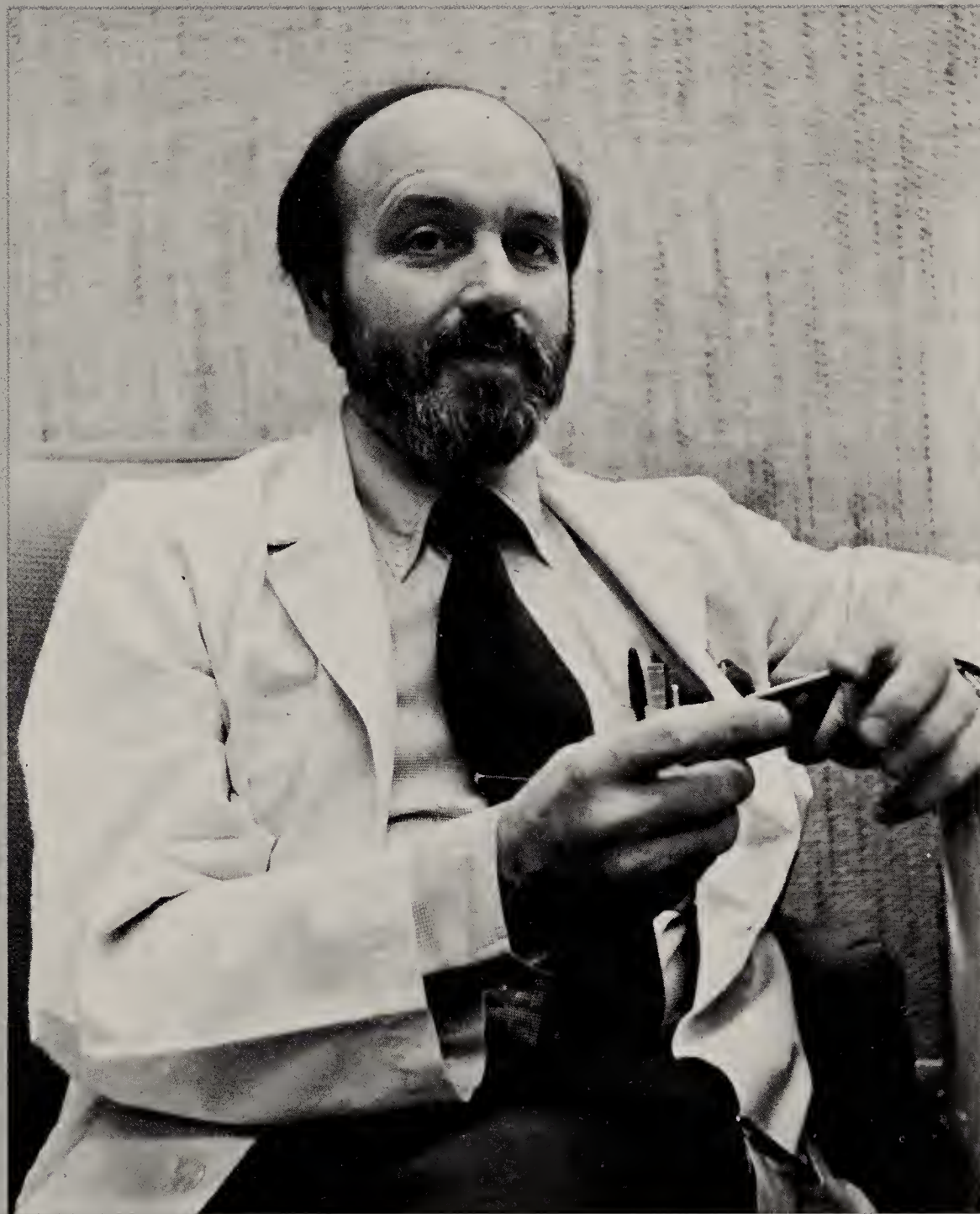
Saturday, 8:00 p.m.—He is having dinner with friends when his beeper goes off. On the phone, the resident monitoring his replantation case tells him the thumb's temperature has dropped. Something is wrong with the circulation. The replant is failing.

Saturday, 9:00 p.m.—Dr. Schenck is back in the OR with Drs. Chesney and Jones. Hours are spent trying to locate the cause of the problem. It is apparently due to arterial blockage because the venous anastomotic sites have not clotted. The artery with suspected internal damage will have to be removed and replaced with a vein graft. In other words, the thumb will have to be revascularized.

Sunday, 7:00 a.m.—Revascularization is complete. Dr. Schenck returns home and the day passes uneventfully.

Monday—Despite the weekend disruption, Dr. Schenck follows his normal weekday routine. He sees patients all day.

Tuesday, 10:00 a.m.—The thumb is failing again. Dr. Schenck suspected this might happen but had hoped against the odds. After dis-



cussing the situation with the patient and his mother, the decision is made to amputate on Wednesday.

Dr. Schenck reflects on the week's experience, "There was apparently damage further out in the artery than was visible to us initially, even through the microscope. The injury was an avulsion, and the thumb had been literally twisted off. That's the worst kind

of amputation, and only about one in six can be salvaged.

"We can't fully see all the damage inside the vessels but there must have been quite a lot since the problem wasn't our anastomoses. We did all we could."

This particular case was Dr. Schenck's only failure this year. Eight weeks later a similar replantation was performed—this time the result of a table saw accident.

It was successful.

"I try to make it clear to my patients that there is no guarantee as to the final result. Even in the best cases the final result is never as good as the original. Microsurgery can repair but it can't restore function to exactly what it was before. And there's always the possibility of amputation."

While the patient must prepare for the worst, Dr. Schenck prepares to give his best. Because microsurgery is endurance work, he stays in good shape physically.

"I try to exercise several times a week, usually by swimming. It helps me stay alert during long, unexpected procedures. However, when I'm operating under the microscope, I don't realize how much time goes by until it's over."

Patience. Concentration. Endurance. A steady hand and an even disposition. These are the necessary attributes for the microsurgeon. For even the simplest procedures may take several hours.

Not all hand surgeons use microsurgery in their practice. "In fact, when I was in training, there were no schools that offered microsurgery. I basically had to teach myself. My initial exposure to microsurgery was in a workshop at Montefiore Hospital in New York City." His first microsurgical replantation was done in December 1973. A man had crushed all his fingers and thumb in an escalator gear. "I lost the thumb but managed to save all the fingers," Dr. Schenck recalls.

His enthusiasm for the field has been the driving force behind the growing interest in microsurgery at the Medical Center. In 1978 he established the Microsurgery Laboratory and his Section of Hand Surgery offers one of the few hand/microsurgery fellowships in

the country.

Since 1973, Dr. Schenck has replanted over 70 digits (fingers and thumbs). Many more injuries and disabilities have been treated microsurgically in the form of flap transfers, nerve grafts, tendon implants and revascularization procedures. Dr. Schenck has performed pioneering work with free muscle flap transfer using microneurovascular anastomosis (reported in the April 1977 issue of *Orthopedic Clinics of North America* and in the *Journal of Hand Surgery*, January 1978).

A member of the International Society for Reconstructive Surgery, Dr. Schenck is recognized as one of the leaders in microsurgery worldwide. In his office, stacked neatly behind his desk, are trays holding thousands of color slides that attest to his six-year effort. This past winter he presented a filmed report on his work to the Seventh International Congress of Plastic and Reconstructive Surgery in Rio de Janeiro. In the audience was Dr. Chen Chung Wei, the first surgeon to replant a hand (in 1963).

Dr. Schenck never loses sight of the fact that modern microsurgery is a young art and replantation is an unpredictable proposition.

"You really don't know if your anastomosis is successful until you release your clamps. If it leaks, you may have to redo several stitches.

"My replantation success rate has been quite good (96 percent last year), but with each procedure it will be 10 days *after* the actual operation before I can be certain of success. During that time the hand must be closely monitored. We now use temperature probes in the fingertips. If the surface skin temperature drops

below 30 degrees Celcius, it's an indication there's vascular trouble."

Replants are never scheduled. You just take them as they come.

"The calls often come in the late afternoon or evening," he notes. "Most are industrial or farming accidents. Not every case is suitable for replantation, but when the victim is young and the digit is as important as the thumb, or multiple digits are involved, we want to try."

It is fortunate for Dr. Schenck that complicated (and therefore long) replantations aren't seen too frequently. He is a specialist in a super-subspecialty and has no direct peers at the Medical Center. While he will allow one of his Fellows to perform some of the anastomoses, he never leaves the OR. He is the only surgeon at Rush-Presbyterian-St. Luke's Medical Center with the necessary expertise to oversee such operations.

"I've had times when, after going all night, I thought we were done at 7:00 a.m. But then a complication set in and I had to go back...I actually got done at noon.

"You have to be prepared not to give up."

Dr. Schenck recalls that his longest operation was an elective procedure—a toe-to-thumb transfer that took four operations with 33 hours of surgery over a four-day period. Several clotting complications necessitated reopening the wound, reanastomosing certain veins and grafting others. But the "thoe" as it is called, survived.

How can a microsurgeon withstand the strain and uncertainty of such work? Replies Dr. Schenck, "I like what I'm doing. I love things difficult and delicate.

"I couldn't be doing microsurgery if I didn't."



CARDIAC COMEBACK

by Eve Brassey

Professionals directly caring for heart attack victims saw the need for special education to help patients deal with their condition even before discharge from the hospital. The Rush program—using slides, tapes, and booklets—now is used in eight states.

From Room 1018 of Presbyterian-St. Luke's Hospital come the strains of *Switched-On Bach*, and projected on a screen is a plump cartoon character named Charley.

Charley has suffered a heart attack, and he is in the process of learning all about his condition—what caused it, the extent of the damage, and how to change his lifestyle to prevent another disastrous attack.

Reverend Raymond Hightower is sitting up in his bed in room 1018. He and his primary nurse, Beth-Anne McNeil, R.N., are following Charley's progress together.

Reverend Hightower is one of the million persons who suffered heart attacks in the U.S. last year. Charley is the hero, and sometimes anti-hero, of a seven-part sound/slide presentation called Cardiac Comeback.

Developed just a few years ago at Rush-Presbyterian-St. Luke's Medical Center, Cardiac Comeback now is helping cardiac patients at hospitals in eight states. The Medical Center's BioService Corporation is currently producing and marketing Cardiac Comeback to hospitals throughout the U.S., and Charley will soon be featured on closed-circuit television within the Medical Center.

The development of Cardiac Comeback is a story of collaboration among nurses, physicians, administrators, dietitians, audio-visual specialists and a medical illustrator brought together by a common concern—helping cardiac patients on the road to recovery.

It began with Karyn Holm, R.N., Assistant Professor, Rush College of Nursing and Teacher/Practitioner, Medical Intensive Care Unit, and one of her graduate stu-

dents in the College of Nursing, Pamela Carlsen, R.N. Both have family backgrounds of cardiac problems: Holm's grandmother and mother and Carlsen's father all had had heart attacks so they were especially interested in recovering heart attack patients.

In 1974, Holm was working in the Medical Intensive Care Unit (MICU) where she saw scores of cardiac patients. Holm and Carlsen observed that the transfer from the MICU to the general medical floor was a particularly traumatic transition for patients. While in the Medical Intensive Care Unit, patients were monitored constantly; nurses took care of the slightest physical needs. Yet, once on the medical floor, patients had to adjust psychologically to losing the security of 24-hour-a-day medical supervision.

Freed from the intrusive apparatus of the MICU and suddenly gaining a degree of privacy, patients found themselves with plenty of time—time to wonder if they would have another sudden heart attack, to fear being weak and helpless, to worry about the future. Time also to learn about their condition—what caused it, how it will be treated, whether it can be controlled, and what life will be like after leaving the hospital.

The idea of developing a cardiac patient education program coincided fortuitously with the implementation of primary nursing at Rush. With primary nursing, each nurse is assigned to specific patients. Nurses follow their patients from admission to discharge, and they are responsible for all aspects of their patients' nursing care. They are responsible too for patient education—and must see to it that patients

understand fully their condition and their treatment. The primary nurse also is a teacher.

And, in 1975, when Holm and Carlsen became interested in the idea of education for cardiac patients, there had never been a formal program. Without any prepared materials, primary nurses found it difficult to teach patients how best to speed their recovery and to avoid another heart attack.

Holm and Carlsen approached their colleagues and found sufficient interest to form an interdisciplinary group of 11 professionals — surgical, medical and psychiatric nurses, a dietitian, quality assurance nurses and a nurse who worked with a group of cardiologists. Many of these had worked with Holm and Carlsen on the Medical Intensive Care Unit. They began meeting Monday mornings at 6:45.

"I thought they were crazy when our meetings were scheduled for

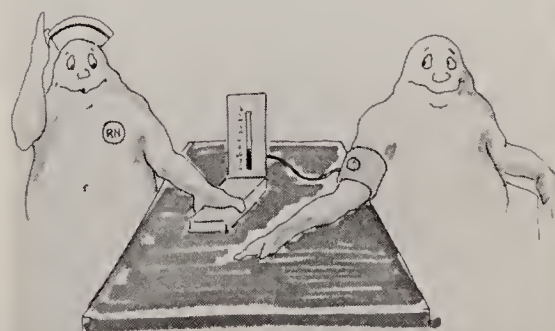
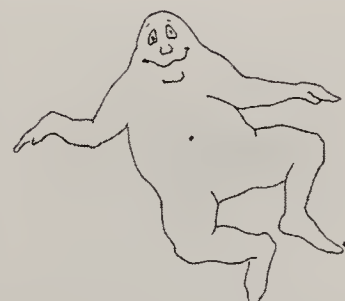
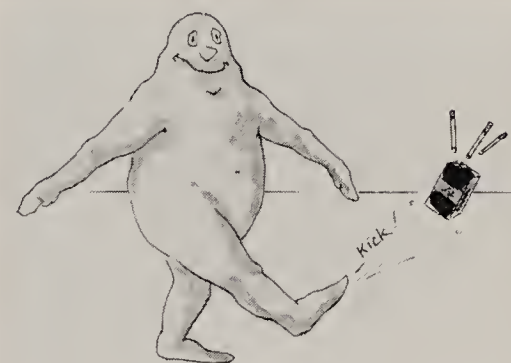
6:45 a.m.," recalls dietitian Nancy Fiedler, R.D., "I'm just not a morning person, especially in the middle of winter. But I made every meeting. There was a lot of energy expended; it was a nice way to start out the week."

"When you have a motivated group," says Holm, "it makes a big difference. You don't have any management problems—even when you're dealing with 15 or 20 people."

Seven topics were identified: the structure and function of the heart, prevention of heart attacks, general activity, sexual activity, emotional stress, medications, and nutrition. Each participant chose a topic upon which to write material for a patient class.

The goal was to supply information that was complete, brief and direct. They hoped the program would prompt patients to discuss their concerns with their primary nurse and doctor. And they

Cardiac patients should give up smoking.



A primary nurse discusses a Cardiac Comeback segment with a heart attack victim.

Karyn Holm, R.N., and Lenn Block, Director of Biomedical Communications, inspect the final product.

wanted the information to be understandable. They consulted cardiologists about the content of the program. The authors learned that newspapers are aimed at the sixth-grade reading level, and since their patients varied widely in educational background, they adopted that guideline.

Patient education traditionally has been the physician's responsibility, and the group was anxious to gain support from Medical Center physicians. Robert Hauser, M.D., Attending Physician, Section of Cardiology, Presbyterian-St. Luke's Hospital, and Assistant Professor, Rush Medical College, provided such support.

"I don't think anyone appreciates the time it takes to write material for patients," said Dr. Hauser. "It takes time because you have to simplify and explain the terms. I've done it, and it's agonizing. It's much easier for me to write in scientific and medical terms for my colleagues."

To present the program to patients as upbeat, positive and hopeful, the name "Cardiac Comeback" was chosen. "Patients will reject the material if it doesn't give them something to believe in," said Fiedler.

Next, the team tackled the problem of presentation. Other hospitals, they learned, provide rehabilitative education to cardiac patients using a "group" format—which allows for lectures as well as discussions. They agreed to try this approach.

Les Wolf, Biomedical Communications engineer, and Pam Carlsen, R.N., discuss the script for Cardiac Comeback.



A year after the group began meeting they felt the program was ready for "review" by the cardiologists and a nursing administrator. Group members were confident that their program would be approved and implemented. They were due for disappointment.

Although the content was greeted with enthusiasm, the format for presentation was impractical. At the Medical Center, cardiac patients are interspersed on nearly every medical floor and the transportation required for classroom instruction of patients was not feasible.

"We all wanted to provide some form of education to our patients," recalled Carlsen, "so the group kept on meeting."

In hopes of devising a more practical presentation, they took their written material to Lenn Block, Director of the Medical Center's Department of Biomedical Communications. "I was impressed by how thorough and well-written their program was," said Block. "Nothing had ever been brought to me so well prepared. I began to suggest various ways they could present their material using audiovisual equipment."

Block began speaking of illustrations, taping, recording and production costs. The group realized that they must clear another hurdle—money. Luther Christman, Ph.D., R.N., Dean of the College of Nursing, and Vice President for Nursing Affairs, helped them obtain a \$10,000 grant from the Chicago Community Trust.

With money available and Biomedical Communications recruited for the project, an audiovisual Cardiac Comeback was about to become a reality. The group selected an easy-to-operate portable projector which the

nurses could move from room to room. In this way, the entire program could be brought to the patient's bedside.

The material written and the method of presentation determined, Cardiac Comeback literally went to the drawing board. Cheryl Haugh, a medical illustrator in Biomedical Communications, was asked to illustrate the series.

Haugh read the entire script and remembered Charley, a cartoon character she had created some years earlier. She described Charley as "the average schmo...an ordinary guy with good intentions. We laugh *with* instead of *at* him because his foibles are likely to be our own weaknesses."

The group felt Cardiac Comeback came to life once Cheryl introduced them to Charley.

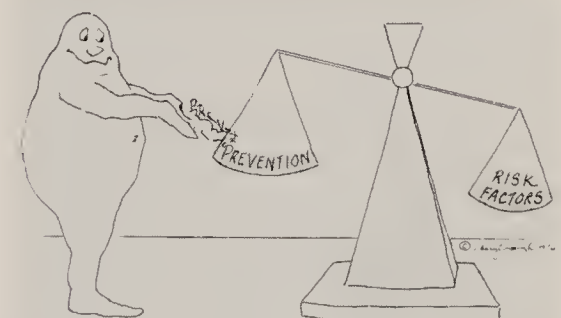
Sexual activity was the topic selected for the pilot segment. If they could handle so sensitive a topic, the group felt sure they could get the rest of the segments accepted as well.

They began to hold brainstorming sessions to develop illustrations for their script. All kinds of ideas were rattled off—even silly ideas—in hopes of generating more practical ones. Imaginative, even whimsical, visuals began to emerge—a sponge was drawn to illustrate edema, Charley's getting caught in traffic created dangerous stress, and a railroad track illustrated the delivery of oxygen to every part of the body.

For each of the seven topics, Haugh made approximately twenty-five illustrations—and in developing each illustration, she made several sketches. In all, over 600 drawings were produced for Cardiac Comeback.

Biomedical Communications spent over 850 hours producing

Who is most likely to suffer a heart attack?



Cheryl Haugh, medical illustrator, works on sketch of Charley for Cardiac Comeback.

Cardiac Comeback, recall both Michael Brooks, Producer/Director for Biomedical Communications, and Les Wolf, Chief Electronic Engineer for Biomedical Communications, who was responsible for the sound and sequencing of the program.

"Sometimes it's amazing to think it ever got produced," said Brooks. "The nurses were fantastic to work with because they allowed us to be creative, and they were extremely well organized as a group."

Dr. Christman remarked that the program "takes into consideration the various ways people learn. It provides multiple ways to learn, and each technique—whether visual, audio or written—reinforces the others."

In fact, the program has proven more flexible than Holm and Carlsen first hoped. Patients who are blind, or who cannot read, may choose only one component of the program. All patients are given a copy of the accompanying written material to keep for future reference, and patients select the order in which they will view the segments.

From the beginning of its development, Holm and Carlsen worked to evaluate Cardiac Comeback's effectiveness. Now, five years after they initiated the project, Holm and Carlsen are completing their research report. Early findings showed that patients have better comprehension with the teaching method used for Cardiac Comeback than with traditional patient education meth-



Michael Brooks and Cheryl Haugh review slides.

ods. Holm and Carlsen also found that comprehension scores are higher with patients who have a family history of heart disease or who have a high number of risk factors.

Since Cardiac Comeback was introduced in 1977, its developers have discovered additional dividends for patients and staff. The patients like the individualized attention; it promotes a good rapport with the primary nurse. Reverend Hightower says, "I felt comfortable asking my nurse, Beth-Anne, questions that might have been more difficult to ask in a classroom. I was also able to

decide for myself when and how I would view the programs and read the material."

This freedom of choice is extremely important for patients. Making any decision helps restore a sense of control over their bodies and their lives.

"Patients need something to grasp onto after a heart attack," says Philip Liebson, M.D., Assistant Director, Section of Cardiology and Associate Professor, Rush Medical College. Dr. Liebson believes that Cardiac Comeback has been successful in improving the patients' psychological state. "They discover that

Most cardiac patients can resume normal daily activities—in moderation.



Pam Carlsen, R.N., records tape for audio portion of Cardiac Comeback.



Selecting slides for Cardiac Comeback.

their condition is neither unique nor hopeless, and they learn how to correct it. When patients know nothing about their post-heart attack state, they often place an unreasonable number of restrictions on themselves."

Psychiatric nurse Andrea Bar-sevick, M.S., R.N., agrees with him. Patients have a lot of pent-up fear if they are unsure of their condition and don't understand their restrictions. "This fear can turn a patient into an invalid," she warns. "It is difficult for a patient to make the transition from complete bed-rest to reestablishing a daily routine, but Cardiac Comeback makes it a lot easier."

"Before Cardiac Comeback, patient education lacked the impact of a visual presentation," recalls Dr. Messer, Director, Section of Cardiology and Professor, Rush Medical College. "Its content and the way it has been produced help get the message across. Cardiac Comeback really makes an impression on our cardiology patients."

Beth-Anne McNeil, Reverend Hightower's primary nurse, says, "He made the decision on his own to change his lifestyle, and Cardiac Comeback reinforced that decision. When Reverend Hightower went home, I can honestly say that he understood his medication and the extent of damage to his heart. And he had a good idea of how to care for himself."

Peggy Williams, R.N., worked for a group of cardiologists while she was part of the project. She says, "No matter how intelligent they are, patients who do not understand their condition and their medication often return to



the hospital with complications."

Families have been encouraged to view the series with the patient to relieve some of their tension and fears. "Well-meaning relatives can be very overprotective unless they are given some guidelines," says Bette Burton, R.N., Assistant Head Nurse.

Professionals have long been aware that thorough understanding of their illness increases patients' chances for full and lasting recovery. Many workers in the medical field today anticipate that the responsibility for

patient education as a vital aspect of preventive medicine will be written into the job description of every health care professional. Already, teaching is an important function of the primary nurse. Says one primary nurse who often uses Cardiac Comeback, "I derive a lot of satisfaction from teaching. I'm happy knowing that when my patients walk out the hospital door, they're taking some recovery and prevention home with them."

Perhaps the most significant evaluations of Cardiac Come-

back come from the patients themselves.

Reverend Hightower says, "My occupation is counseling people about their problems and helping them make changes in their lives. Essentially, what I tell my people over and over is 'Don't agonize — organize.' Now I know I will have to

listen to my own words and stop pushing myself so hard—learn how to adopt a calmer approach to tension-charged situations. Cardiac Comeback showed me that I'm going to have to start taking my own advice if I'm going to prevent another heart attack."

⑩

Heart attack patients should avoid or control stress.



Primary nurse Beth-Anne McNeil, R.N., describes the audiovisual portion of Cardiac Comeback to patient Reverend Raymond Hightower.



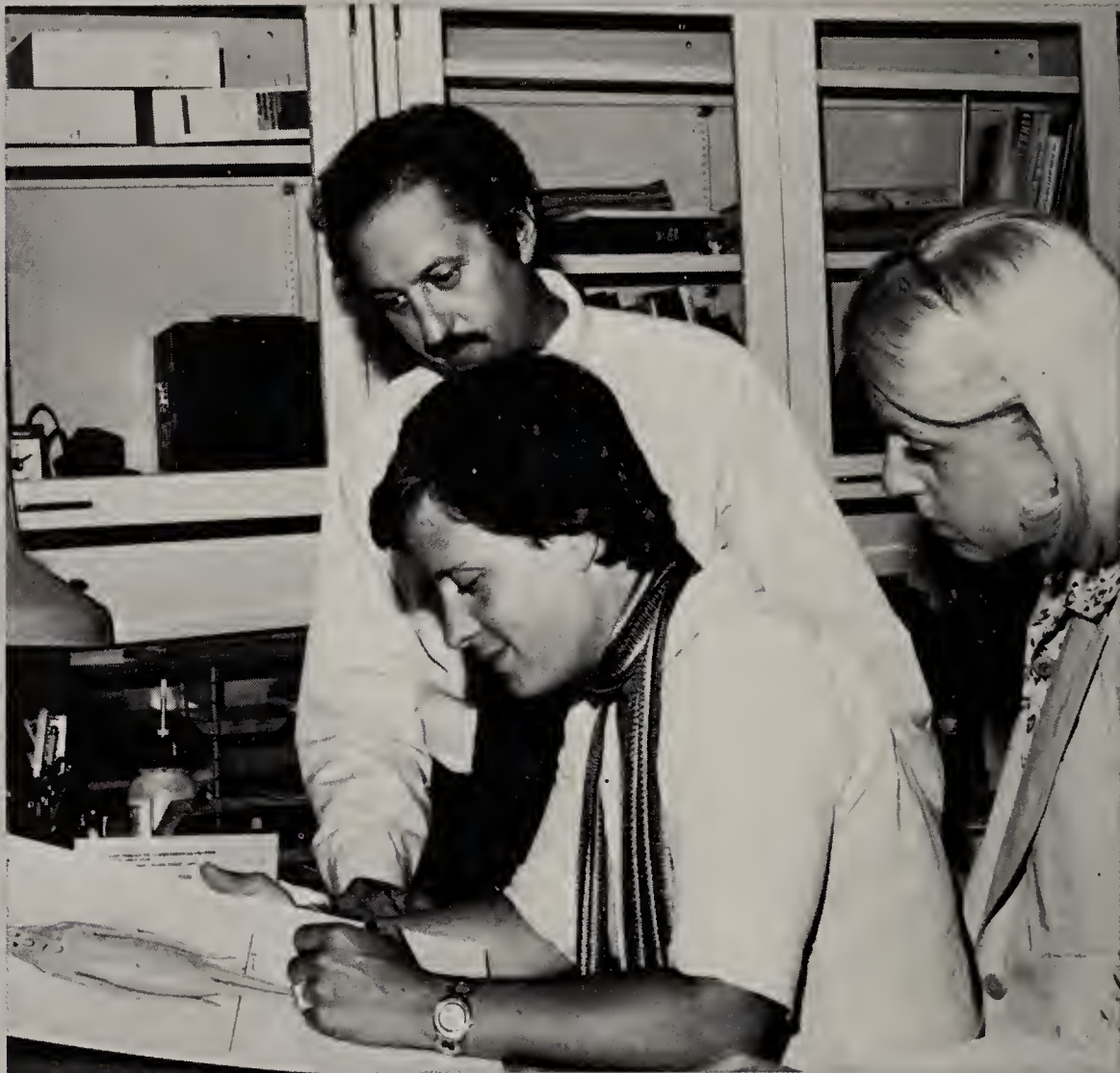
Charley... A Character Sketch

He has all the worries and frustrations of any patient recovering from a heart attack. He is overweight, and he craves hot fudge sundaes. He wants to resume his normal activities, but he is afraid of overexertion. He will experience the same stresses and strains that preceded his heart attack, and he is afraid of causing another attack.

He is an amorphous cartoon character named Charley created by Cheryl Haugh, medical illustrator in the Medical Center's Department of Biomedical Communications, to illustrate the patient education series, Cardiac Comeback. "I tried to portray someone who doesn't always succeed, but who tries," said Haugh.

Post-heart attack patients are generally in an anxious state during their hospitalization. Consequently, it's a difficult task to capture their attention in order to teach them about their illness. Cardiac Comeback uses humor to educate and rehabilitate cardiac patients.

Charley's stubborn, yet likeable personality began to develop after Haugh spent weeks and months drawing him over and over again. In each segment of Cardiac Comeback, there are approximately 25 illustrations. To create each drawing, Haugh would produce three or four illustrations before the final artwork. In all, she made over 600 sketches for Cardiac Comeback.



Medical illustrator Cheryl Haugh receives suggestions while drawing the artwork for Cardiac Comeback from Lenn Block, Director of Biomedical Communications, and Karyn Holm, R.N.

"Charley's personality developed because I was getting tired of drawing him," said Haugh. "I had to animate him and develop his personality in order to relieve the boredom of drawing him so many times. As an end result, his personality also gave depth to the series."

Haugh drew emotion into Charley's simple face by adding wrinkles to his forehead, altering his eyebrows, or changing the size of his pupils. Viewers can almost feel his anger when a red-faced Charley stomps out of a crowded grocery store.

By adding lipstick to the figure's mouth, Haugh created Charley's

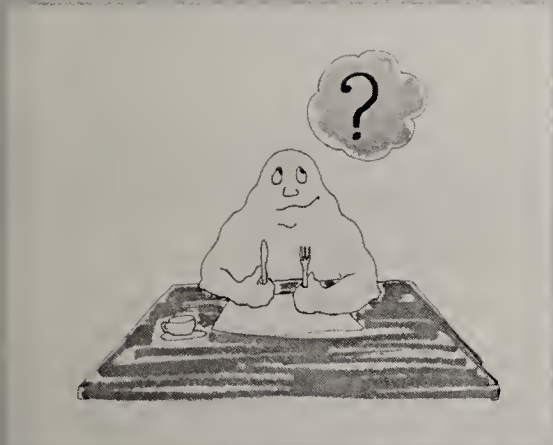
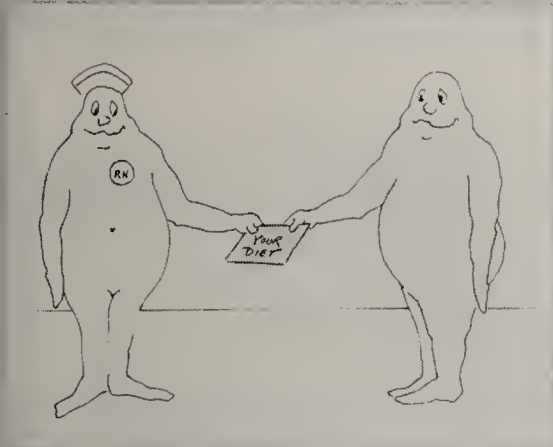
wife. Junior wears a baseball cap, and the doctor wears a stethoscope. "It's kind of funny, you aren't aware of Charley's nakedness until the scene where he's putting on a sweater," said Haugh.

"One of our concerns was Charley's weight, he looks fat," Haugh said. "But, in the nutrition series, Charley addresses the problem, and he begins to do something about it."

A primary nurse recalls she once had a patient viewing the series who commented, "Charley should read this program, he could stand to lose some weight."

Charley's down-to-earth and good-natured, but the viewer also

Following a proper diet is crucial for cardiac patients.



sees him when he's being a worrywart and is troubled by his future. He does not represent any one ethnic group, occupation, or income level. "Charley's effective because he's non-threatening," said primary nurse, Karen Kunz, R.N. "We relate to him because his insecurities and fears are often our own."

The viewer sees him tempted by rich food and losing his cool while driving in heavy traffic. But Charley is also seen adapting to his new diet and handling stressful situations.

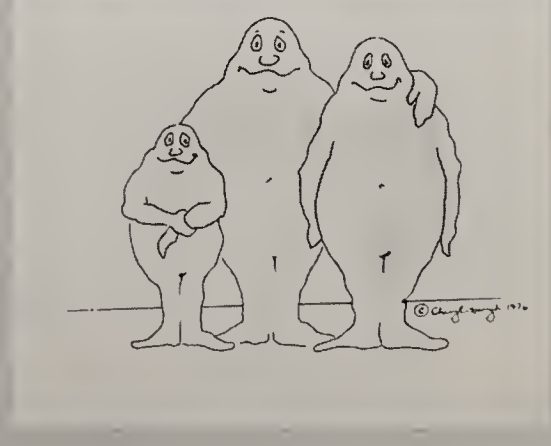
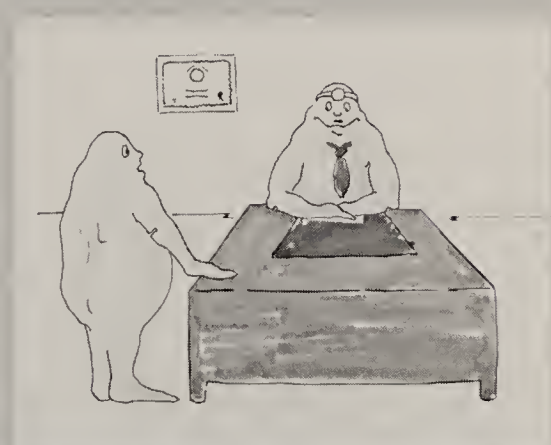
Because Charley is described by a range of human emotions—thoughtful, flippant, carefree, anxious, worried—patients are able to take him seriously.

Through Charley, the sensitive issue of sexual activity after a heart attack is discussed. Haugh said that she tried to illustrate "the warm, expressive side of sex that includes the total relationship between a couple." In one scene she shows Charley and his wife sitting at the end of the bed discussing a problem. His wife shows concern and understanding by putting her arm around Charley and listening to his fears and doubts.

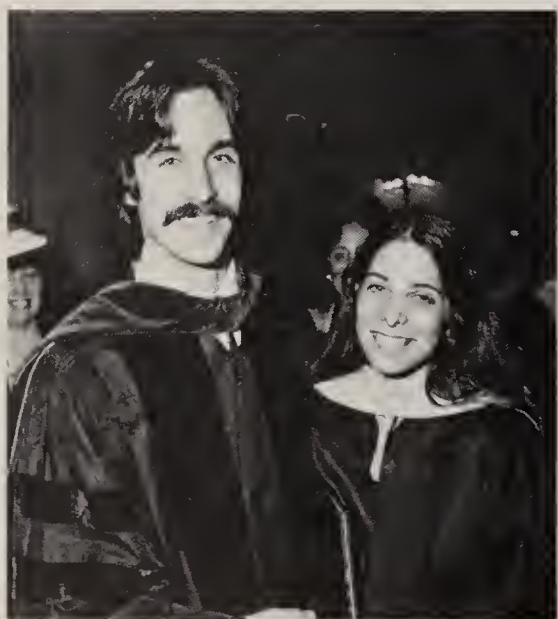
Charley is able to weather his heart attack and serve as a model to other cardiac patients after changing his lifestyle—but he does have to learn the hard way.

"Charley has an indomitable spirit," said Michael Brooks, director and producer of Cardiac Comeback. "He just survives somehow." ①

Cardiac Comeback helps patients and their families to understand their condition.



1979 COMMENCEMENT



COMMENCEMENT

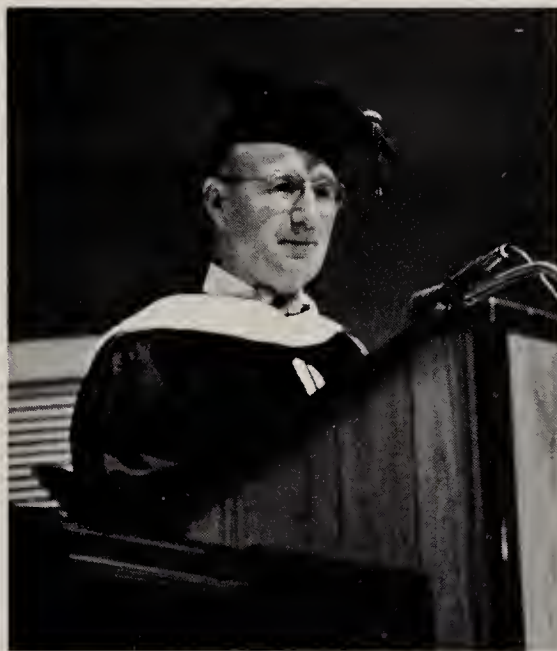
Three hundred and twelve graduates received degrees at the commencement ceremonies of Rush University, held June 9 at Orchestra Hall. Harold Byron Smith, Jr., Chairman of the Trustees, and James A. Campbell, M.D., President of the Medical Center, conferred the doctor of medicine, master of science, and bachelor of science degrees on the largest graduating class in Rush University's history.

The ceremonies marked the fifth full commencement for Rush University, the fourth commencement for the College of Health Sciences, the fifth for the College of Nursing, and the 105th for Rush Medical College. One hundred and twenty-four graduates received the degree of doctor of medicine, 42 the master of science degree with a major in clinical nutrition, 121 the bachelor of science degree with a major in nursing, and 10 the bachelor of science degree with a major in medical technology.

An honorary degree of doctor of humane letters was conferred upon Gerard Piel, President and publisher of *Scientific American*. Piel presented the commencement address, "Medicine: A Liberal and Public Profession."

Following Piel's address, Dr. Campbell spoke of the traditions at Rush, saying that "one of those is sharing commitments with our graduating classes and their sharing their commitments to us and to the rest of society by taking their oaths." In this spirit, the graduates were asked to face their parents, faculty and friends while reciting the Oath of the Health Professional and the Oath of the Physician.

Gerard Piel, Honorary Doctor of Humane Letters



Gerard Piel

Theodore B. Schwartz, M.D., Chairperson, Department of Internal Medicine, presented the Honorary Degree of Doctor of Humane Letters to Gerard Piel, president and publisher of Scientific American at this year's commencement. Dr. Schwartz's remarks follow:

President Campbell, I have the high privilege to present Gerard Piel for the Honorary Degree of Doctor of Humane Letters. Mr. Piel is no stranger to honorary degrees but today's presentation is singularly suitable in that Rush University, an institution devoted largely to health and the biologic sciences, should bestow a doctorate of *Humane Letters* on the president and publisher of the *Scientific American*, a publication which has achieved extraordinary success in bridging the communications gulf that threatens to alienate science from society.

Mr. Piel's eminence stems from a decision, made 33 years ago with his colleague, Dennis Flanagan, to transform a "good grey" science magazine into a lively, lucid and authoritative

scientific journal for all citizens, scientists and non-scientists alike. It is no happenstance that each issue contains a section devoted to "Science and the Citizen." It was Mr. Piel's brilliant conception that each article should be written by an acknowledged master of the field under discussion. Contributors have included many Nobel laureates beginning with Albert Einstein, and the articles are created with the help of editors, including Mr. Piel himself, who are experienced in the almost lost art of forcing a scientist to write intelligible English.

Under the leadership of Mr. Piel, the *Scientific American* measured by any criterion, must be considered a most successful venture, but its worth extends beyond the usual yardsticks. It can be likened to grandma's perpetual stewpot. Constantly replenished by Mr. Piel and his associates, it provides for the rest of us not only intellectual nourishment, but also a sense of dining with the family, a strong feeling of communion.

Mr. Piel maintains an editorial stance that is dispassionate without being neutral. Last January we were told that, "Coal would fill a large part of the [energy] gap if its production and use were encouraged by national policies" and, in April, we read a deadpan but chilling account of how ineffective a particle beam would be in countering a nuclear attack.

Advocacy is not new to Mr. Piel. In parallel with his preoccupation as an editor and publisher, he has become thoroughly conversant with the principles and goals of science in a modern, highly technologic and politicized society. Over the years he has emerged as a persuasive spokesman for the scientific community. He is all the more effective since, as a non-scientist himself, he is immune to the charge of resolving a conflict of interest in his own favor. Mr. Piel

does not mince words. Of especial interest to those of us who profess to educate is his recent warning that the autonomy of the American university is being subverted by seductive and addictive Federal grants and contracts.

The title of one of his books summarizes his concept of our salvation, "Science in the Cause of Man," and he describes his vision eloquently, "It is the great destiny of science not to ease man's labors or prolong his life, noble as these aims may be, nor to serve the ends of power, but to enable man to walk upright without fear in a world which he at length will understand and which is his home."

In view of this more recent role of spokesman for science, is it possible that Mr. Piel would have served us even better if he were not diverted by his arduous labors at the *Scientific American*? This question arose in the case of Samuel Johnson, when he had immersed himself in the creation of his Dictionary. We may answer it with the words of Thomas Burch, a contemporary literary critic. He addressed Dr. Johnson directly, saying, "You might, perhaps, have chosen [a career] in which your genius would have appeared to more advantage, but you could not have fixed upon any other in which your labours would have done such substantial service to the present age and to posterity."

HONORS ASSEMBLY

The third annual Honors Assembly was held Commencement morning, June 9, in the Lecture Center of the Academic Facility. James A. Campbell, M.D., President of the Medical Center, was the Master of Ceremonies at the assembly, convened to honor outstanding students and teachers of the academic year 1978-79.

The Awards

ALPHA OMEGA ALPHA HONOR MEDICAL SOCIETY

Undergraduate membership is extended to medical students who give promise of becoming leaders in the field of medicine.

Students elected to membership in Alpha Omega Alpha were:

John Burkart
*G. Cascino
*Dennis Cooper
Loren Dardi
Gary Dausmann
Tom Deutsch
Judith Feinberg
Ann Flannery
Judd Jensen
Bruce Johnson
*Kathleen M. Kelley
Steve Korbet
Kenneth Kuznetsky
David Miller
Allen Muehrcke
John Neylan
Douglas Olsen
John Quinn
Paul Rubin
Robert Schwartz
Marc Silver

**Students installed as members
in 1978.*



Kenneth Kuznetsky, M.D., accepts membership to Alpha Omega Alpha Honor Medical Society—and a handshake—from Robert S. Blacklow, M.D., Dean, Rush Medical College and Vice President, Medical Affairs.

SIGMA THETA TAU—THE NATIONAL HONOR SOCIETY FOR NURSING—GAMMA PHI CHAPTER

Membership is extended to undergraduate and graduate nursing students who demonstrate outstanding academic achievement, leadership qualities, and commitment to the ideals and purpose of the profession.

Members in the Gamma Phi chapter are:

UNDERGRADUATE NURSING

Claudia Austin
Kathleen Boothe
Jody Brunette
Bonnie Lynn Buzzelli
Patricia Caraway
Magdoline Hennein
Mary Leahey
Sheri Londal
June Peck
Kathleen Pesch
Pamela Pollard
Michael Presser
Bonnie Scott
Joan Serrahn
Cynthia Shuttleworth
Paula Trybula
Ginger Wessel

GRADUATE NURSING

Mary Therese Balskus
Mary Virginia Casey
Kathryn Cook
Paula Cook
Cheryl Dauro



Luther Christman, R.N., Ph.D., Dean, College of Nursing and Vice President, Nursing Affairs, presents the College of Nursing Dean's Award to Pamela Pollard, R.N.

Nancy Kushner
 Mary Orban Mueller
 Sharon Nisius
 Susan Noble
 Jane Perry
 Dorothy Soverly
 Rosemary White

THE NATHAN M. FREER PRIZE

To Dennis Cooper, voted by the faculty as outstanding senior medical student. This award was endowed in 1892.

THE HENRY M. LYMAN MEMORIAL PRIZE

To Jamie Hayden, the outstanding junior medical student as voted by the faculty. This award was endowed in 1908.

THE DAVID PECK PRIZE

To Carol Ruth Jack, for the student who has made the greatest contribution to the Student National Medical Association.

THE UNDERGRADUATE CARDIOLOGY AWARD

To Kenneth Kuznetsky, for the graduating student who has had the best performance in a cardiology elective course.

THE AMERICAN MEDICAL WOMEN'S ASSOCIATION SCHOLARSHIP AND ACHIEVEMENT CITATION

To Judith Feinberg, Ann M. Flannery and Kathleen M. Kelley, 1979 graduates of Rush Medical College.

RUSH-PRESBYTERIAN-ST. LUKE'S NURSES ALUMNI ASSOCIATION AWARD

To Bonnie Buzzeli, for the outstanding nurse graduate.

THE COLLEGE OF NURSING DEAN'S AWARD

To Pamela Pollard, for superior academic leadership in the undergraduate nursing program.

THE COLLEGE OF HEALTH SCIENCES DEAN'S AWARD TO UNDERGRADUATE STUDENTS

To Pamela Wetteruer and Eileen Zollman, for outstanding aca-

ademic performance by undergraduate students as chosen by the faculty.

THE AESCULAPIUS AWARD

To Joseph Huelsing, D.O., Chief Resident of Pediatrics, for outstanding resident-physician as voted by the students.

THE DANIEL BRAINARD AWARD

To Eunice Schuytema, Ph.D., for outstanding teacher in the basic sciences as voted by the graduating medical students. Dr. Schuytema is Assistant Professor of Microbiology.



Carol Ruth Jack, M.D., (left) happily accepts the David Peck Prize from Mary

Palmore, M.D., for her contributions to the National Medical Association.



Medical technology students Pamela Wetterauer (left) and Eileen Zollman receive the College of Health Sciences Dean's Award to undergraduate students

from David I. Cheifetz, Ph.D., Dean, College of Health Sciences and Vice President, Scientific Affairs.

THE PHOENIX AWARD

To Allan T. Luskin, M.D., for outstanding physician-teacher as voted by the graduating medical students. Dr. Luskin is Assistant Professor of Immunology and Instructor, Internal Medicine.

THE COLLEGE OF NURSING UNDERGRADUATE FACULTY AWARD

To Peggy Lusk, M.A., for outstanding teacher as voted by the graduating students. Dr. Lusk is Assistant Professor of Nursing.



Joyce M. Stoops, R.N., M.S.N.Ed., President of the Rush-Presbyterian-St. Luke's Nurses Alumni Association, presents Bonnie Lynn Buzzelli, B.S.N., with the

association's award. James A. Campbell, M.D., Medical Center President, applauds.



Peggy Lusk, M.A., recipient of the College of Nursing Undergraduate Faculty Award, gets congratulatory handshake from student Betsy Eckstein.



The Daniel Brainard Award for outstanding teacher as voted by graduating medical students is presented to Eunice Schuytema, Ph.D., by student Judith

Feinberg. John S. Graettinger, M.D., Associate Dean, Rush Medical College, is in background.

Mission Statement for Rush-Presbyterian- St. Luke's Medical Center

(Adopted by the Board of Trustees,
November 14, 1979)

"The primary mission of the Rush System for Health is to provide a full range of quality health services to a defined population of one to one-and-one-half million people.

"The structure of the system will be defined through the selection of existing hospitals and their organized medical staffs in target communities and an academic health center. Eighty to 95 percent of the thus defined population will be representative of the socio-economic, demographic and geographic composition of the nine county Chicago metropolitan area, including a fair share of the medically underserved. The remaining 5 to 20 percent of the population served will be drawn from selected rural and other metropolitan areas.

"The system will provide appropriate levels of care consistent with the patients' needs, reflecting intensities of illness, complexity of diagnosis and therapy, and the requirements for effective and efficient application of technology through the system's interrelated institutions and staffs. Health services and care shall include the conventionally recognized diagnostic, curative, and restorative programs as well as programs for promotion of health and for early detection of disease.

"The system will strive for excellence in delivering health care, in the education of health manpower and in research. The system will be balanced with respect to manpower production, retention, geographic distribution and specialty need in medicine, nursing and the related health professions. It will integrate academic functions with health care functions in order to reinforce the posi-

tive impact of one on the other.

"The system will be effective, economically viable and will promote the principles of efficiency and the appropriate allocation of cost and generation of resources. At the center of the system, as the academic health center, is Rush-Presbyterian-St. Luke's Medical Center whose vitality and effectiveness are basic to the success of the Rush System for Health."

The Campaign for the Future of Success

Three recent investments in the present and future Medical Center gave new momentum to the Future of Success Campaign.

A Chicago family, impressed over the years that "a Rush certificate on the wall of a doctor's office was a guarantee of excellence," established a trust of \$1.7 million to assure that Rush-Presbyterian-St. Luke's continues as "a great leader in the field of medicine."

A grant of \$1 million was received from the Oliver M. Burton Trust, to be used toward the construction of the new patient wing of Presbyterian-St. Luke's Hospital. Mr. Burton, who was born in 1877 and died in 1955, founded what is now known as the Burton-Dixie Corporation and was a noted business and civic leader in Chicago. Three generations of Rush physicians cared for Mr. Burton and members of his family, including his daughter, the late Babbs Burton Wastcoat. A 37-bed patient unit in the new wing will memorialize Mr. Burton and Mrs. Wastcoat. Charles W. Woodford, a Burton trustee, told the Trustees of the Medical Center that the award was made in recognition that Rush-Presbyterian-St. Luke's "is an extraordinary flagship institution."

The Northern Trust Company, as trustee of the Dr. Edwin Warner Ryerson Memorial Fund, awarded \$400,000—the second grant

of this amount—toward the endowment of The Dr. Edwin Warner Ryerson Center for Orthopedic Research and Treatment at the Medical Center. Dr. Ryerson was an internationally known orthopedic surgeon and research scientist who served on the medical staff of St. Luke's Hospital for half a century and who, in retirement, enthusiastically supported the 1956 merger of Presbyterian and St. Luke's hospitals, which became the base of the present academic health center. Dr. Ryerson's widow, Adelaide, was a long time member of the Woman's Board and was active in many other Medical Center Affairs. The Ryerson Memorial fund, established by Dr. and Mrs. Ryerson, provided the nucleus funds on which the internationally recognized achievements of the Department of Orthopedic Surgery have been built. The endowment of the Center will assure the future of this important activity.

These three gifts brought to more than \$7 million the amount received for Future of Success campaign purposes since July 1. To November 30, the total in gifts, pledges and bequests received by the Campaign amounted to \$47,069,821—62.8 percent of the goal of \$75 million. Ten gifts of more than \$1 million have been received for a total of nearly \$21 million, or 44 percent of total receipts. Fifty-five gifts of \$100,000 to \$1 million have been received for a total of more than \$14 million, or 30 percent of receipts.

Test Vaccine to Fight Lung Cancer

A new agent composed principally of lung tumor antigen is being tested on patients at Rush-Presbyterian-St. Luke's Medical Center and several other institutions to determine whether it can prevent lung cancer from recurring.

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The research is being directed here by Jules E. Harris, M.D., the Samuel Taylor III Professor and Director, Section of Oncology. Before coming to the Medical Center, Dr. Harris participated in tests of the vaccine at the University of Ottawa, where the results were highly promising.

The vaccine uses lung tumor antigens to specifically stimulate anti-tumor immune responses in lung cancer patients. Antigens are biochemical structures found on the surface of cells which permit the body to recognize the cell as being either normal or malignantly formed. Use of a vaccine to stimulate immune response is called active specific immunotherapy.



Jules E. Harris, M.D.

Surgically removed lung cancer normally has a 60-70 percent recurrence rate. Of the research conducted in Ottawa, Dr. Harris said, "Out of a group of some 60 patients, those treated with the vaccine had a clear survival advantage. Few had any recurrence, and we believe that those who have survived more than four years may be regarded as cured. The study provides the first convincing evidence that active specific immunotherapy might be effective in human malignancy. "However," said Dr. Harris, "for our results to be meaningful, they have to be repeated in a large cooperative trial, such as we now have under way."

Only one other American institution—Allegheny General Hospital in Pittsburgh—is participating in the current clinical trial, as are 10-12 Canadian institutions. Three hundred patients will be involved in the five-year trial, with about 75-90 expected to come from Rush.

To produce the vaccine, lung tumor antigens are homogenized in a liquid called Freund's adjuvant, which is a combination of mineral oil and killed bacilli. "We believe the Freund's adjuvant is a very important part of the lung tumor antigen vaccine because it gives us specificity," Dr. Harris said. "The tumor antigen is mixed with Freund's adjuvant which is the ideal solution in which to administer it because it will enhance the specificity of the immune system's reaction to the lung cancer."

The current study is three-pronged. All patients are being treated surgically and all patients will be monitored closely for the presence or development of specific anti-tumor immune function. One group of patients will undergo surgery only. A second group will be treated following surgery with Freund's adjuvant alone, and a third group will receive the lung tumor antigen in Freund's adjuvant. These patients will be vaccinated at three different sites three times over a 90-day period, beginning 10-30 days after surgery.

"We don't know which if any of the three arms will do better over the long haul," Dr. Harris said. "If we can show that the treated groups do not relapse as quickly as the untreated group, or if relapse is prevented in the treated groups, then we have shown a benefit."

Geriatric Psychiatry Training Grant Awarded

A three-year \$90,000 training grant for geriatric psychiatry has been awarded by the National Institutes of Health to Jack Wein-

berg, M.D., Professor of Psychiatry at RPSLMC and Lawrence Lazarus, M.D., Assistant Professor of Psychiatry at the Medical Center and Psychiatric Consultant to the Johnston R. Bowman Health Center for the Elderly.

Funds from the grant will be used to offer classroom and in-hospital training in geriatric psychiatry to residents at RPSLMC, the Illinois State Psychiatric Institute (ISPI), and at several area hospitals that are a part of the Rush care network. The program is aimed primarily at psychiatry residents, but also will be offered to residents in the family practice department at Rush.

According to Dr. Lazarus, the incidence of psychiatric disturbance is higher in the population over 65 than in any other age group and, consequently, there is a great need for psychiatrists with geriatric experience and training.

"It is important to differentiate normal psychological problems such as grief and mourning from clinical psychiatric states such as depression or paranoid reactions, which require psychiatric intervention and treatment," Dr. Lazarus explained. "We will train residents to diagnose and treat these and other psychiatric problems of the elderly. And we hope that, in time, the people we are teaching will become teachers and consultants themselves."



Jack Weinberg, M.D.

Dr. Weinberg also is Director of the Illinois State Psychiatric Institute, where Dr. Lazarus is Director of Geriatric Services. They will be assisted by Young Soo Ha, M.D., one of the first physicians in the Midwest to finish a fellowship in geriatric psychiatry. Dr. Ha is Instructor in Psychiatry at Rush University and Assistant Director of Geriatric Services at ISPI.

Conference on Use of Lithium Carbonate in Cancer Treatment Held at Keeshin Center

The first scientific meeting on the possible use of lithium carbonate as an adjunct to cancer treatment was held June 7-9 at the John L. and Beatrice Keeshin International Biomedical Systems Planning Center for Rush University in Eagle River, Wisconsin.

The conference was the first to be held in the Keeshin Center, established in 1978 by Mr. and Mrs. Keeshin to foster the exchange of promising ideas in biomedical research. The center, which now functions as Rush University's own think tank, is located on a 40-acre estate on the

shore of Catfish Lake, three miles south of Eagle River. It consists of 5,000 square feet of meeting, dining and residential space.

More than 50 physicians and scientists attended the meeting. They came from different nations and represented psychiatry, oncology, hematology, pharmacology and immunology. The attendance was about 30 percent greater than expected, according to Arthur H. Rossof, M.D., Assistant Professor of Medicine (Oncology), who organized the meeting. Cochairman was William A. Robinson, M.D., Director, Division of Oncology and Professor of Medicine, University of Colorado, Denver, Colorado.

Lithium carbonate has been used for a number of years to treat manic depression. Psychiatrists administering the drug began to notice that it elevated their patients' white blood counts. Cancer chemotherapy and radiation therapy on the other hand almost always cause bone marrow suppression which results in dangerously low white blood counts and serious threat of infection. After a time, the therapy must be reduced or even stopped to save the patient from infection. Without the therapy, patients are in danger of succumbing to

the tumor. Lithium carbonate offers the possibility of a solution to this vicious cycle because of its ability to modify the damage to the bone marrow. This capability may make it possible to administer much larger doses of chemotherapy and radiation therapy, thus greatly enhancing the potential for successfully treating the patient.

Papers presented at the conference reported on the mechanism by which lithium worked on the bone marrow, on clinical studies of the effects of lithium on patients suffering from certain types of cancers, and on the effects of lithium on immune function.

The secluded atmosphere of the Keeshin Center contributed substantially to the success of the event, according to Dr. Rossof.

"It gave people plenty of opportunity to mingle, to have small group discussions and to really get to know each other and each other's work. There was a real think tank atmosphere. Everyone was in the same place and together most of the time. I'm still getting letters from participants telling me how stimulating it was and how much they enjoyed it."

Kidney's Odyssey from Midwest to Rome

Two tickets—round trip—Chicago to Rome—Mrs. J. Miller and Mr. K. Miller.

But Mrs. J. Miller was not accompanied by her husband. The 'K' in Mr. K. Miller stood for "Kidney"—the kidney that would occupy the seat next to her on the 12-hour flight to Rome. There, it would be implanted in a 32-year-old woman suffering end-stage kidney failure.

June Miller is a medical technologist in the Medical Center's Section of Organ Transplantation. She is one of four staff members and seven medical students



Scientific meeting on use of lithium carbonate in cancer treatment was held at Keeshin Center

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whose job it is to match kidney donors with transplant recipients.

Recently, Miller became the first procurement staff member ever to fly abroad "on business." At the same time, Rush-Presbyterian-St. Luke's Medical Center became the first program in the state to send a kidney overseas, said Paul Volek, M.P.H., Organ Procurement Coordinator. The Medical Center's organ procurement program procures and preserves more kidneys than any other group in the Midwest.

Volek attempts to have the kidneys transplanted in Illinois, working with the University of Illinois Medical Center's tissue typing lab, which has tissue types of all patients in the state who are awaiting transplants.

However, if there are no suitable recipients in the state at the time—as was the first obstacle with Mr. K. Miller—the tissue typing information is shared with similar laboratories around the country through a computer hookup called UNOS, the United Network for Organ Sharing. The tissue matching process is the basis for kidney distribution across the country.

Rush-Presbyterian-St. Luke's Medical Center first heard of "Mr. K. Miller" through a telephone call from Porter Memorial Hospital in Valparaiso, Indiana, saying they had a potential donor.

Volek immediately informed his team that they would need to locate a recipient and prepare for the preservation of the kidneys. The kidneys, according to Volek, were in excellent condition. As is true with all kidneys being preserved for transplant though, they could only be kept viable in the perfusion machine for 72 hours.

"We tied into the national computer network to locate a recipient and the matches were perfect—one in Springfield and one in Iowa City," said Volek. "The chance for a perfect match is one in 37,000—and we got two!"

A team member boarded a

commercial flight, intending to take one kidney to Springfield and then to fly on to Iowa City with the other kidney. In the meantime, a back-up recipient was located in Minnesota.

Within twenty-four hours of the initial call from Indiana, the kidney arrived at the hospital in Springfield. But, once on the operating table, the patient had suffered a setback. The transplant could not be done.

The kidney was then sent to Minnesota, and in Chicago, where it was 1:30 a.m., the members of the procurement team were called to the hospital to resume making calls. There was always the chance the transplant in Minnesota would fall through as well.

Team members called every transplant program in the country, a rare occurrence given the number of potential recipients in the area. They had started in Illinois, moved to the Midwest, and were now making calls across the country.

"We were waking surgeons at 3:00 a.m. to ask them if they wanted a kidney that was 36 hours old. Once a kidney is 24 hours old, a lot of surgeons are skeptical even though the kidney is still good," said Volek.

The team was running out of national programs on which to call. If the kidney were going to be used, it would have to go overseas. At 5:00 a.m. Volek received word that the Minnesota transplant had been aborted. Luckily, the team had connected with a surgeon and recipient in Rome. By telephone and by means of a resident who knew enough Italian to get by, the details were worked out. With 17 hours left before the kidney would be too old for transplant, June Miller boarded the airplane at O'Hare Airport. Mr. 'K' Miller, preserved in a portable perfusion machine, occupied the seat next to her.

Flight attendants and other passengers stopped to ask Miller questions and, according to her, the flight became a mini-course

in organ procurement and transplantation. When the plane landed in Rome, Miller and the kidney were whisked away to the University of Rome Hospital.

There a team of specialists waited. The recipient was ready for surgery, and the kidney was 68 hours old—older than any kidney Rush-Presbyterian-St. Luke's Medical Center had ever preserved. "And more widely traveled too!" noted Volek.

Hospital officials in Rome report the transplant was a success—the recipient is in very good health and has returned home.

New Computer Technique for Locating Brain Tumors Developed at RPSLMC

A new way to locate deep brain tumors using CAT scan data has been perfected by scientists at RPSLMC. Since 1977, with assistance from the Medical Automation Research Unit, Richard D. Penn, M.D., Associate Professor of Neurosurgery, has been developing a series of computer programs to extract additional information from CAT scan data. CAT (computerized axial tomography) scans provide three-dimensional pictures of various portions of the body. But until now, precise spatial information needed to locate the site of tumors in the brain has been difficult to obtain from the CAT scan. Dr. Penn's computer programs involve a technique called image processing and allow him to produce a greatly enhanced, three-dimensional picture of the brain. With this additional visual information, it is possible to pinpoint the exact location of a suspected deep tumor, and perform a biopsy of it through stereotaxic surgery.

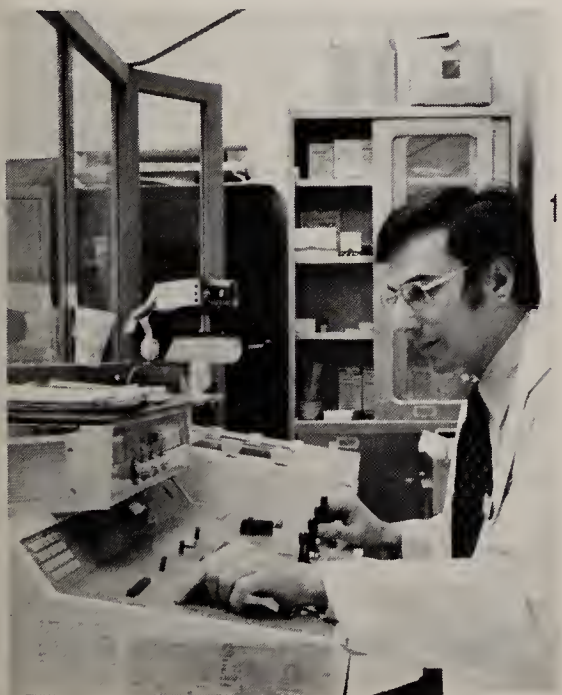
Using special surgical and x-ray equipment for the insertion of a small biopsy needle to a pre-

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determined point in the brain, stereotaxic surgery can be done under local anesthesia with little or no injury to surrounding tissue. In contrast, a regular biopsy of a deep brain tumor involves conventional surgery. Such biopsies have been done with reluctance because of the risk of causing severe brain damage while trying to locate and reach the tumor.

According to Dr. Penn, image processing programs expand the usefulness of the CAT scanner. Dr. Penn says he hopes the use of the CAT scanner with stereotaxic surgery will further the neurosurgeon's understanding of brain tumors and their treatment.

The new technique is described in a recent issue of *Neurosurgery*. The article, entitled "Stereotaxic Surgery Using CAT Scans," was written by Dr. Penn and Walter W. Whisler, M.D., Professor and Chairman of the Department of Neurological Surgery. The article's findings are the result of a year-long research project conducted by the Medical Center's Department of Neurological Surgery and the Medical Automation Research Unit in the Department of Medicine, which was funded by the Association for Brain Tumor Research and the Helene Borkan Fund. Assisting Drs. Penn and Whisler were Charles A. Smith, B.A., and William A. Yasnoff, M.D.



Richard D. Penn, M.D.

New Medical Center Trustees

Announcement of the election of new members to the Board of Trustees of Rush-Presbyterian-St. Luke's Medical Center was made by Board Chairman Harold Byron Smith, Jr.

William N. Lane III, of Lake Forest, Chairman and President of Lane Industries, Inc. was elected at the June meeting, for a two-year term. Lane was graduated from Princeton in 1965.

Also named trustee at the June meeting was Joseph J. Muenster, M.D., of Hinsdale, Illinois, newly elected President of the Medical Staff.

Dr. Muenster is a native of St. Louis and received his M.D. Degree from the St. Louis University School of Medicine in 1947. He is Professor of Internal Medicine at Rush Medical College.

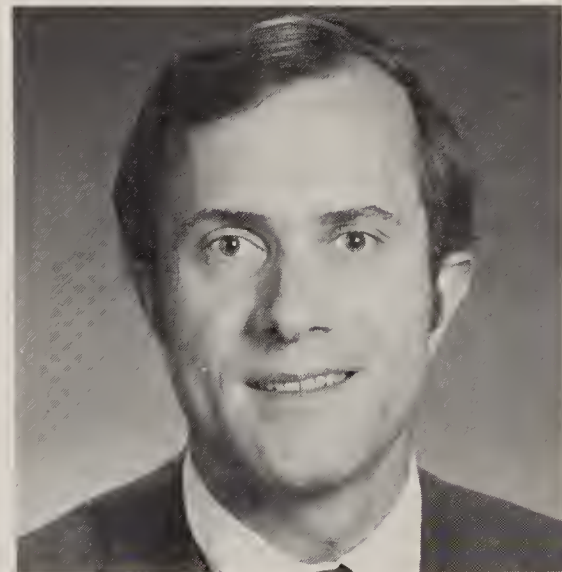
Trustees elected at the September meeting are Richard G. Cline and John W. Madigan.

Cline is Senior Executive Vice President of Jewel Companies, Inc., in Melrose Park, Illinois. He is a 1957 graduate of the University of Illinois.

Madigan is Vice President and Chief Financial Officer of the Tribune Company, Chicago. He is a graduate of the University

of Michigan School of Business Administration.

At the November meeting, Ronald Nelson, M.D., (RMC '74) was elected to the Board, and Mrs. William G. Karnes, president of the Woman's Board from 1974-76, was made a Life Trustee. (Dr. Nelson's photograph was unavailable at press time.)



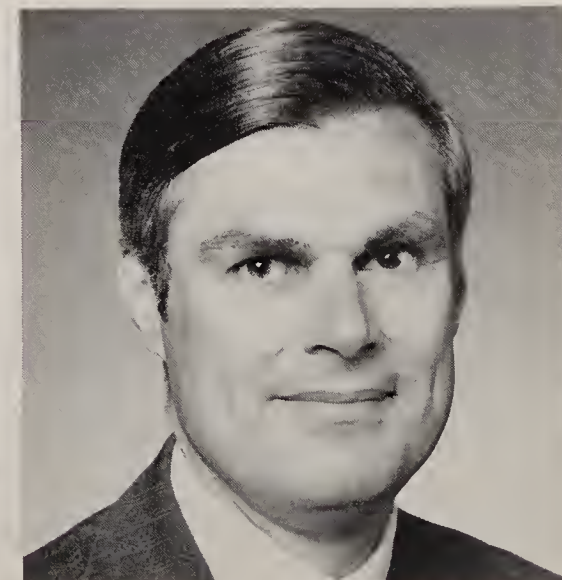
William N. Lane III



Richard G. Cline



Mrs. William G. Karnes



John W. Madigan

First Multiple Sclerosis Workshop Held

RPSLMC's Multiple Sclerosis (MS) Center and the Office of Continuing Education sponsored the first national training meeting on the Vocational Rehabilitation Perspective in Multiple Sclerosis. The meeting was in summer/1979.

From as far away as Alaska, some 125 state vocational administrators, training directors, casework supervisors, medical advisors, and other professionals who work with MS patients, particularly in job placement, attended the three-day workshop.

The object of the conference was to provide participants with the necessary background to enable them to return to their home states and arrange similar meetings, thus making the vocational rehabilitation system throughout the nation more sensitive to the special needs and problems of people with MS.

Faculty for the workshop included many members of the Rush University faculty, as well as staff of the Multiple Sclerosis Society, vocational specialists who work with MS patients, and some patients who discussed their experiences in the work world.

A packet of special educational materials was also developed for the meeting in conjunction with staff from the Office of Curriculum Development and Evaluation, and staff members of the Department of Biomedical Communications.

Medical Staff Officers Elected

Joseph J. Muenster, M.D., Senior Attending Physician, Departments of Internal Medicine (cardiology) and Pediatrics, has been elected president of the Rush-Presbyterian-St. Luke's Medical Center's 600-member

medical staff.

Other officers elected at the medical staff's annual meeting this year are: Robert J. Jensik, M.D., President-elect, who begins his term as President in May 1981; Ernest W. Fordham, M.D., Secretary; and Leonard J. Hertko, M.D., Treasurer.

In his role as President, Dr. Muenster also serves as a member of the Executive Committee and as a Trustee of the Medical Center, he succeeds Milton Weinberg, Jr., M.D., who was medical staff President for the past two years.

A graduate of St. Louis University School of Medicine, Dr. Muenster joined Presbyterian Hospital in 1954 after active duty in the U.S. Air Force. As a cardiologist, he developed several techniques in cardiac catheterization. He is a Fellow of the American College of Physicians, American College of Cardiology, the American College of Chest Physicians and a member of national and local heart associations. As a result of his interest in young people and children, he established the Section of Adolescent and Young Adult Medicine at the Medical Center; he is professor of Medicine at Rush Medical College.



Joseph J. Muenster, M.D.

Robert J. Jensik received his M.D. Degree from the University of Illinois, and served his internship at Milwaukee County General Hospital. Following residencies at Research and Educational Hospital, University of Illinois College of Medicine, St. Joseph Hospital of Chicago, and the Rockford Tuberculosis Sanitarium, Dr. Jensik joined the medical staff of St. Luke's Hospital in 1949. Currently he is senior attending cardiovascular-thoracic surgeon at Rush-Presbyterian-St. Luke's Medical Center and clinical professor of surgery at Rush Medical College.

Ernest W. Fordham, M.D., is chairman and senior attending physician in the Department of Nuclear Medicine, as well as professor of nuclear medicine at Rush Medical College. A graduate of the University of Illinois College of Medicine, Dr. Fordham served his internship and residency at Presbyterian-St. Luke's Hospital. After two years at Chanute Air Force Base Hospital in Rantoul, Illinois, he returned to the Presbyterian-St. Luke's staff in radiation therapy and nuclear medicine in 1965.

Leonard J. Hertko, M.D., is senior attending physician and associate professor of medicine at Rush Medical College. A graduate of St. Louis University School of Medicine, Dr. Hertko served his internship and residency at Presbyterian-St. Luke's Hospital, and joined the medical staff in 1966.

Weinberg Named Distinguished Senior Scholar

Jack Weinberg, M.D., Professor of Psychiatry, Rush Medical College, has been named the first Distinguished Senior Scholar under a new program established by the National Institutes of Mental Health (NIMH).

The two-year appointment is an

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agreement between Rush Medical College and NIMH's Center for Studies of Mental Health of the Aging.

Dr. Weinberg will supervise a comprehensive review of curricula and training methods used by medical schools and residency training programs throughout the nation in preparing professionals to work with the elderly. Information will be exchanged among participating programs to strengthen their training capacities and responses to the special problems and needs of older patients. The consultations will also explore means to motivate greater numbers of mental health professionals to work with the elderly.

In addition to his appointment at Rush, Dr. Weinberg is Director of the Illinois Mental Health Institute, Chicago, and immediate past president of the American Psychiatric Association. He is also Professor of Psychiatry at the University of Illinois Abraham Lincoln School of Medicine.

Russe Named Associate Dean

Henry P. Russe, M.D., has been named Associate Dean, Medical Sciences and Services, Rush Medical College, and Assistant Vice President for Medical Affairs at RPSLMC. Dr. Russe's appointment was announced by Robert S. Blacklow, M.D., Dean of Rush Medical College and Vice President for Medical Affairs. Dr. Russe was formerly Associate Vice President (Medical Services) and Chief of Staff at The University of Chicago Hospitals and Clinics.

In his new position, Dr. Russe will be responsible for the function of all medical, non-surgical departments in Presbyterian-St. Luke's Hospital and Rush Medical College, including the Departments of Internal Medicine, Family Practice, Dermatology, Neurological Sciences, Nuclear Med-



Henry P. Russe, M.D.

icine, Pediatrics, Preventive Medicine, and Psychiatry.

A graduate of Indiana University and The University of Chicago Medical School, Dr. Russe is trained as an immunologist and allergist. He has held faculty positions at Northwestern and Loyola universities, and he is a former Vice President, Internal Medicine, Columbus-Cuneo-Cabrini Medical Center. A member of many professional organizations, Dr. Russe is President of the Institute of Medicine of Chicago and past president of the Chicago Society of Internal Medicine and of The University of Chicago Medical Alumni Association.

Academic Facility Receives Award

The Chicago Building Congress this year presented its 23rd Annual Merit Award to Rush University's Academic Facility, 600 South Paulina Street, for "successful integration of high-technology components in a pleasing and sensitive manner."

The award marks the third major architectural recognition of the Academic Facility. In 1978 it received a Distinguished Building Award from the Chicago Chapter of the American Institute of Architects (AIA) and a Design Honor Award from the Illinois Council of the AIA.

Completed in 1976, the six-story glass and steel structure was designed by the Chicago firm of Metz, Train, Olson and Youngren, Inc. Its most unusual architectural features are interstitial space (working space between floors) to keep future renovation costs low; special acoustical controls to minimize the noise of passing trains, extensive use of skylights and windows; and an exterior aluminum sheath which will make the building look new even after 50 years.



Academic Facility of Rush University.

This latest citation reads, "The building forms the keystone to a dynamic complex of existing and evolving structures dedicated to improved health care."

Study Leukemia Resistance in Pregnant Rats

Myelogenous leukemia induced by magnesium deprivation cannot be transmitted to pregnant rats, and when a rat with leukemia becomes pregnant, signs of the cancer subside and the remission persists until the offspring are weaned.

This new information, which may provide answers to questions involving human susceptibility to leukemia, was presented by researchers from Rush-Presby-

terian-St. Luke's Medical Center at the 63rd annual meeting of the Federation of American Societies for Experimental Biology this spring in Dallas. The research team included George M. Hass, M.D., The Otho S.A. Sprague Professor Emeritus, PSLH, Grant H. Laing, M.D. M.S., Emeritus, Rush Medical College and Emeritus, PSLC, Patricia A. McCreary, M.D., A.B., Associate Professor, Rush Medical College and Associate Attending, PSLH (also Internal Medicine), and Raymond M. Galt, M.D., A.B., Assistant Professor, Rush Medical College and Associate Attending, PSLH.

The investigators made their discovery conducting experiments with magnesium. Experimental rats were fed a synthetic diet deficient in magnesium. Within 35-40 weeks, 10 percent of the rats developed myelogenous leukemia (myelogenous refers to blood cells arising in the bone marrow). Another 20 percent developed malignant lymphoma, a lymph cancer within 6-24 weeks. Both forms of cancer were fatal within a few weeks of their appearance.

The researchers then attempted to transmit these cancers to healthy rats. They found that both neoplasms were transmissible. But, they also discovered that

the leukemia could not be transmitted to pregnant animals, and that if an animal with cancer subsequently became pregnant, the cancer entered a state of remission which lasted as long as the female was pregnant or lactating. Once the offspring were weaned, the cancer resumed its course and the animal died. In the case of lymph cancer, however, pregnancy had no effect.

The investigators found that animals with cancer did not transfer the disease to their offspring, and that once these offspring were out of the womb, they had no special immunity to leukemia, lymph, or any other type of cancer, but were as susceptible to cancer transmission as any other rat.

The researchers don't know why magnesium deprivation induces myelogenous leukemia and malignant lymphoma. Nor have they discovered why pregnant animals are resistant to leukemia. They speculate, however, that the same factors which protect the fetus from contracting its mother's cancer may also be responsible, at least in part, for the pregnant rat's resistance to leukemia transmission and progression. The team now is conducting research to attempt to answer these questions.

Medical Center Affiliates with Grant Hospital and Skokie Valley Community Hospital

Rush-Presbyterian-St. Luke's Medical Center has signed two agreements to enhance patient care services and educational programs, as well as to control costs through joint utilization of resources. The Medical Center signed agreements of affiliation with Grant Hospital of Chicago and Skokie Valley Community Hospital.

The affiliation agreements demonstrate a shared commitment to interinstitutional planning and program development, including patient care, undergraduate, graduate, and continuing medical education, nursing education, clinical research and shared institutional support services.

In keeping with the voluntary cost containment effort, the Medical Center, with each institution, will seek joint methods of containing and/or reducing costs.

All institutions signed the agreements for the purposes of fulfilling the common goals of bringing the highest levels of quality in patient care to their service communities, providing high-quality education in the health fields, and achieving efficiency and economy in these and related activities.

Under the agreements, each institution continues as an autonomous corporation governed independently by its respective governing body. The agreements provide for appropriate faculty appointments to Rush Medical College for members of the medical staff of Grant Hospital and Skokie Valley Community Hospital.

Grant Hospital of Chicago has served the metropolitan Chicago community since 1883. In the past decade, Grant Hospital of Chicago



(Left to right) George M. Hass, M.D., Patricia A. McCreary, M.D., Raymond M.

Galt, M.D., and Grant H. Laing, M.D.

has undergone a dramatic updating and expansion of facilities and equipment including, notably, the opening of the Van der Kloot Pavilion in 1975. Grant Hospital of Chicago today is a 508-bed voluntary teaching hospital, located in the city's Lincoln Park community, and offers a broad spectrum of basic inpatient and outpatient services. In addition, Grant Hospital of Chicago offers a number of special programs in areas such as allergy and immunology, orthopedics, rehabilitation medicine, cardiopulmonary care, and intensive alcoholism treatment.

Grant Hospital of Chicago today provides medical residency programs as well as teaching programs in ancillary health care services, including medical technology and radiation technology. Grant's clinical facilities are also used to train nursing students. During 1978, Grant Hospital of Chicago had more than 14,000 patient admissions, more than 11,900 visits to its emergency room, and more than 4,700 surgical procedures.

Grant Hospital of Chicago's outreach programs to its immediate community currently include participation in the innovative Five-Hospital Homebound Elderly Program (FHHEP), which offers a range of medical and social support services to the area's large population of incapacitated elderly.

Skokie Valley Community Hospital is a 271-bed, not-for-profit community hospital, serving the north suburban area and the north side of Chicago since November of 1963. Skokie Valley offers a broad range of inpatient services, including medicine, surgery, obstetrics/gynecology, orthopedics and pediatrics. Its CAREUNIT alcoholism treatment program is one of the few such programs in the country accredited by the Joint Commission on Accreditation of Hospitals.

Skokie Valley Community

Hospital also offers a cardiac rehabilitation program for both inpatients and outpatients and a Good Health Program, which provides individualized screening to identify health risks and offers health-promoting activi-

ties for employee groups and community organizations.

During 1979 Skokie Valley had more than 8,600 admissions, 15,700 emergency patients, 4,600 surgical procedures and served more than 70,000 outpatients.



Skokie Valley Community Hospital



Grant Hospital of Chicago

Clinic for Mentally Disordered Offenders

A unique outpatient psychiatric program for the mentally disordered offender has been established at the Medical Center.

The Isaac Ray Center, the first of its kind in the state of Illinois, is being operated by the Medical Center's Department of Psychiatry under a \$108,000 first-year grant from the Illinois Department of Mental Health and Developmental Disabilities. The center is named for Isaac Ray, M.D. (1807-1881), generally regarded as the father of American forensic psychiatry.

"There is no facility in the state tailored to deal with this kind of patient and there are few such facilities in the country," says James Cavanaugh, M.D., Associate Professor of Psychiatry at Rush Medical College and Clinical Director of the Isaac Ray Center. "Hopefully our center will become a model for future facilities in evaluating and treating the mentally disordered offender."

After the center's first year of operation, Illinois Governor James R. Thompson said, "I commend Rush-Presbyterian-St. Luke's Medical Center for their willingness to set up such a project that deals with the difficulties

of mentally ill offenders. It serves as a model of public/private co-operation in social public policy. The university's willingness to tackle this difficult area of our society is a further indication of the service you are providing to our citizenry."

The treatment program at the Isaac Ray Center has been designed specifically for individuals who have been found not guilty of a crime by reason of insanity and who are in need of outpatient psychiatric care either immediately following the trial or after release from a state mental health center.

Patients who are accepted by the center are under court order to receive outpatient treatment. In the past, such individuals were referred to a community mental health center for voluntary treatment, though such programs are not specifically designed for the mentally disordered offender. A recent change in the state law now enables the criminal courts to order outpatient treatment. The Isaac Ray Center reports its patients' progress to the Cook County Criminal Courts on a monthly basis.

"We're not interested in chronic offenders," says Dr. Cavanaugh, "but we're very much interested in individuals with clearly definable mental illnesses, persons whose symptoms resulted in a crime being committed."

In addition to treatment for the adjudicated offender, the center provides evaluations, treatment, and monitoring for court-referred individuals who have not yet been tried. In the first year of operation, the center's staff has evaluated 59 individuals who have been involved, in Dr. Cavanaugh's terms, in "controversial cases" which required another professional opinion. Evaluations are made only by court order and may involve extensive psychological testing and interviews by several staff professionals. Says Dr. Cavanaugh, "We are finding ourselves in a unique position to

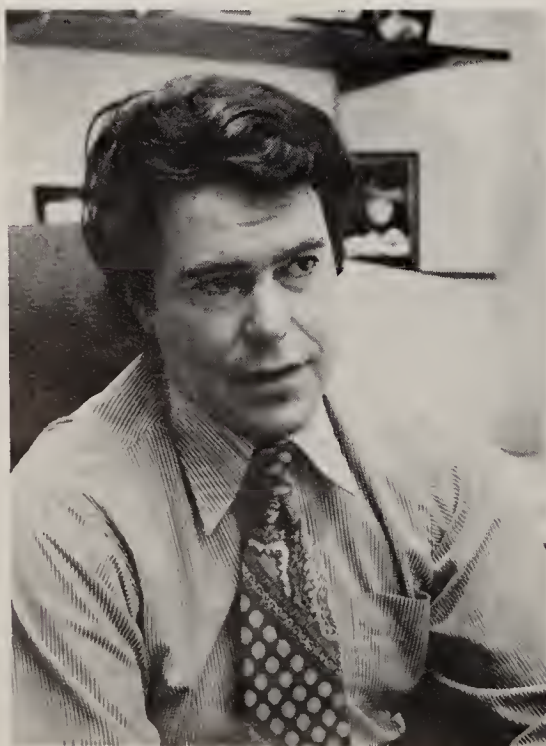
gather very complicated data on offenders who have substantial psychiatric and criminal histories."

The center also is developing an educational program to introduce mental health and legal professionals to the treatment of mentally disordered offenders. Currently the center is offering electives in psychiatry and law to senior psychiatric residents throughout the city. The center also is affiliated with the Illinois Institute of Technology's Kent School of Law.

The Isaac Ray Center uses a multidisciplinary team approach to evaluation, treatment and education. Senior staff members include Dr. Cavanaugh, Bonnie Price, A.C.S.W., psychiatric social worker who for many years supervised the treatment program for *mittimus** patients at Manteno Mental Health Center; Richard Rogers, Ph.D., clinical psychologist, formerly with Chester Mental Health Center; and Barbara Weiner, J.D., administrator and legal liaison for the center, formerly an attorney with the Department of Mental Health who represented the Department before the Criminal Courts of Cook County.

Treatment may consist of drug therapy, individual, group and/or family counseling. Referral resources are provided in the areas of alcohol and drug abuse. Frequency and intensity of therapy are determined on an individual basis.

**Those patients committed to a psychiatric treatment facility because they are unfit to stand trial.*



James Cavanaugh, M.D.

Alumni Bulletin

by P. June Taylor
Director of Alumni Relations

Alumni Association of Rush Medical College Hosts Commencement Activities

Twenty-one members of the Class of 1929 celebrated their 50th year as Rush physicians by taking part in the annual meeting of the Alumni Association of Rush Medical College, its special programs, and the Commencement Banquet on June 8, 1979.

The day's activities began with a coffee reception in Room 600 hosted by Robert S. Blacklow, M.D., Dean of Rush Medical College and Vice President for Medical Affairs, together with the departmental chairmen. Guests included members of the Rush I (pre-1942) graduating classes as well as Rush II (post-1973) graduates.

Tours of the Medical Center were highlighted by four special presentations—"The Sleep Laboratory," hosted by Rosalind Cartwright, Ph.D., Professor and Chairperson of the Department of Psychology and Social Sciences; the Physiology Laboratory, hosted by Robert S. Eisenberg, Ph.D., the Francis N. and Catherine O. Bard Professor and Chairperson of the Department of Physiology; the Rare Book Room of the Rush University library, hosted by Doris Bolef, M.L.S., Director of

the Library of Rush University; and a surgical demonstration through closed-circuit TV, hosted by James A. Hunter, M.D., Professor of Cardiovascular-Thoracic Surgery.

R. Gordon Brown, M.D. '39, President of the Alumni Association, presided at the annual luncheon meeting. James A. Campbell, M.D., President of the Medical Center, recognized the many special alumni and guests present at the meeting. These included Paul S. Rhoads, M.D. '25, last year's alumni lecturer and recipient of the Distinguished Alumnus Award for 1979; William J. Holmes, M.D. '34, this year's alumni lecturer; and Wayne M. Wong, M.D., Trustee. Special recognition and thanks were given to Noel G. Shaw, M.D. '29 and Frank Madda, D.D.S., M.D. '74 for their efforts as class agents for the 50- and 5-year reunion groups.

Dr. Blacklow expressed his pleasure at joining the alumni on the eve of his first commencement at Rush. Referring to his attendance at regional meetings, Dr. Blacklow said, "This is the conclusion of my first academic year at Rush and I must tell you how impressed I have been with the warmth and friendship I have received throughout this year from Rush alumni—not to mention the distinction Rush has retained through the years by the reputa-



Members of the 50-year reunion class of Rush Medical College pose with bust of

Daniel Brainard, M.D., founder of Rush Medical College.

tions of its alumni. I am proud to say that this year's class is starting out with a high reputation also. Eighty-four percent of our newest Rush doctors have been accepted for their 1st, 2nd or 3rd choice residencies through the National Resident Matching Program."

In his President's report on activities at the Medical Center during the past year, Dr. Brown highlighted the groundbreaking in October 1978 for the new patient care facility, the largest component of the \$154 million, five-year program, and The Civic Tribute Dinner in November at which the Honorable Gerald R. Ford was the guest speaker.

Two important events at Rush Medical College during the year were the welcoming of Dr. Blacklow as the eleventh Dean of the College, and the rigorous self-evaluation conducted by the faculty preliminary to the site visit by the Liaison Committee on Medical Education, which led to six-year accreditation.

In reporting on the Alumni Association, Dr. Brown said that discussions were underway to re-establish a broad and reciprocal relationship with Rush Medical College. He pointed to increased attendance at alumni activities and the steadily growing numbers at reunions and regional meetings. Special mention was made of the first Rush II five-year group who had returned to campus for the day.

Dr. Brown concluded with a twenty-one month report on the status of the \$75 million Campaign for the Future of Success, and said that during this time alumni contributions totalled over \$850,000 with one-half of that amount being contributed by a single alumnus and his wife.

Frederic A. dePeyster, M.D. '40 reported on alumni activities for the past year, including the regional alumni meetings in Hawaii, Los Angeles, and San Francisco, which were well attended by both Rush I and Rush II alumni as well

as Presbyterian-St. Luke's House Staff alumni. Dr. dePeyster reported that regional meetings of this nature will be increased during the coming year as well as special representation at major professional society meetings. He concluded by commending the alumni for their support of these meetings and looked forward to seeing them during the remainder of 1979 and 1980.

After the meeting and luncheon, members of the Alumni Association attended a special program of lectures held in the Academic Facility. Dr. Blacklow spoke about "The Future of Rush Medical

College," and Dr. Holmes on "Medicine in the Third World."

Dr. Blacklow said that, "In the years that Rush has been re-activated, there has been a ferment of change...what we are looking for now is to develop stability...We must take this decade of growth and follow it by a decade of maturation."

Faculty development and student aid are the areas Dr. Blacklow identified as needing the most support in the coming decade.

Dr. Holmes is President of the Asia Pacific Academy of Ophthalmology, which he founded, and the Executive Vice President of



Paul S. Rhoads, M.D., 1979 Rush Medical College Distinguished Alumnus (center), with (left to right) R. Gordon Brown, M.D., President of the Alumni Association,

Alumni Trustees Wayne M. Wong, M.D., and R. Joseph Olk, M.D., Vice President of the Alumni Association, and John H. Olwin, M.D.



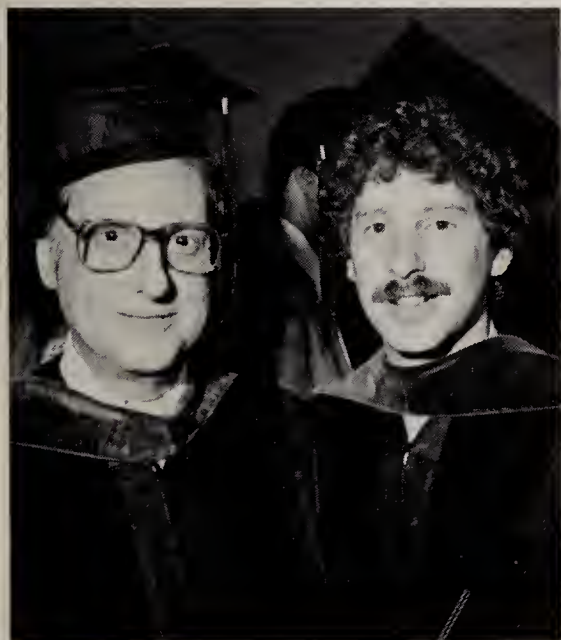
George A. Nicola, Jr., M.D., (RMC '79, center) with brother Frederick Nicola,

M.D., (RMC '77) and their father, George A. Nicola, Sr., M.D., (RMC '37).

the International Agency for the Prevention of Blindness. He has served as a consultant for the World Health Organization, the United Nations, the U.S. Army, and other agencies throughout the South Pacific, Southeast Asia, Africa and the Middle East.

Dr. Holmes spoke about health problems in countries with limited numbers of health professionals. His slides of India, Afghanistan, China, Malaya, Indonesia, and North Africa showed the appalling toll of disease in populations with haphazard sanitation, poor diets, impure water supplies, very little health education, and too few physicians.

Dr. Holmes also spoke of the 40 million people who are needlessly blind, stressing the role of ecology—and especially sanitation—in the prevention of blindness.



William F. Deutsch, M.D., Acting Chairperson, Department of Ophthalmology, and son Thomas A. Deutsch, M.D., (RMC '79).

Alumni Association Commencement Banquet

Representing the Class of 1896, and four generations of an eleven-physician family, Dr. Tolbert Fanning Hill was the honored guest of the Alumni Association at this year's banquet. (See ad-

joining article.) Dr. Hill and his family were among 450 alumni, graduates, faculty and guests who gathered at the Ambassador West Hotel to induct the class of 1979 into the Alumni Association.

Master of Ceremonies for the



Harold Byron Smith, Jr., Chairman of the Trustees, welcomes Tobert Fanning Hill, M.D. (RMC '96) to Alumni Association banquet. Dr. Hill is accompanied by Joseph Cline, M.D. (RMC '79).

banquet, R. Joseph Olk, M.D., '75, Vice President of the Alumni Association of Rush Medical College, and a Trustee of the Medical Center, officially welcomed the Class of 1979 as the newest members of the association, stating that they were "on the verge of beginning a rewarding and fulfilling professional life...a life of service to your patients, a life of stimulation with your fellow colleagues and a life dedicated to the art of healing. You and your families have much to be proud of and I congratulate you, the Class of '79, on this significant milestone."

Dr. Campbell also welcomed the graduates and made special recognition of their parents and spouses, thanking them for their "forbearance, understanding, and tolerance, and for making this class possible in a multitude of ways."

In honoring the Classes of 1929 and 1974 on their return to Rush, Dr. Olk said that "...for both our reunion classes it is

fairly evident that much progress has gone on in our school since your graduations. However, one thing remains very constant at this institution, and that's our commitment to excellence in patient care. I'm confident that each of you here tonight, whether you're from the Class of 1896, 1929, 1974, 1979, or any other year, will testify to this Rush Medical College tradition of our priority for patient care."

Dr. Kathleen Kelly, representing the Class of '79, gave special recognition to several members of the Rush Medical College faculty and said, "We heartily accept membership in the Rush Alumni Association and anticipate both the pleasures and the responsibilities that have been accepted so suc-



Kathleen Kelly, M.D., accepts membership for the Class of '79 in the Alumni Association of Rush Medical College.

cessfully by the many people who have come before us."

Frank Madda, M.D., spoke to the group as the representative of the Class of '74. His address was followed by those of Noel G. Shaw, M.D., representative for the Class of '29 and Emeritus Professor of Pediatrics at Rush, and his colleague, Frederick A. Priest, M.D., '29. Doctors Shaw and Priest were roommates at Baylor University in Texas before coming to Rush, where they also roomed together. Said Dr. Shaw

of Dr. Priest, "Without his encouragement, I don't think I would ever have left Texas and come to this place."

Dr. Priest said, "All the graduates of 1929 have to do is to look around at the grads of this year and see what used to be."

Dr. Blacklow wished the newest Rush Alumni group successful and rewarding careers in medicine and relief of human suffering. He emphasized the need to keep in touch with Rush and come back regularly and often.

In closing, Dr. Olk quoted from a speech given 130 years ago by Daniel Brainard, M.D., the founder of Rush Medical College. (That Dr. Olk should quote Dr. Brainard was, perhaps, particularly fitting for members of the class of '29, whose gift to the medical college was a bust of Dr. Brainard.)

"Your life," said Dr. Brainard to the graduates of the Class of 1849, "is to be one of perpetual charity, of daily relief to suffering. Let me urge you never to forget those pure and honorable principles which should ever guide and characterize men entrusted with so important an office... No pursuit is more worthy of occupying your lives than the acquisition of knowledge and its application to the relief of human suffering."

Dr. Olk left the graduates with one request, that "all of you will become active and involved Rush alumni and be part of Rush's future with your views, your input, and your participation in alumni events and become part of the involved Rush alumni who support our school."

Paul S. Rhoads, M.D., Distinguished Alumnus

The 1979 Distinguished Alumnus Award was presented to Paul S. Rhoads, M.D., ('25) in recognition of his "distinguished and humanitarian service in the practice of medicine," presented by Dr. John H. Olwin.

Dr. Rhoads has published 99 papers and presented 210 others since 1927. His dedication to humanity and his professional leadership have earned him several awards, including the Layman of the Year Award, presented to him by the Greater Chicago Church Federation in 1961, and the Coleman Award of the Institute of Medicine of Chicago, which he received in 1971. Dr. Rhoads served as Chief Editor of the *Archives of Internal Medicine* from 1951 to 1961, and he was the Chairman of the Board of Governors of the Institute of Medicine of Chicago from 1966 to 1970.



Paul S. Rhoads, M.D., (RMC '25) 1979 Distinguished Alumnus.

Dr. Rhoads served internships at Presbyterian Hospital and Cook County Hospital, and later served on the medical staffs of Presbyterian Hospital, Cook County Hospital, Evanston Hospital, and Chicago Wesley Memorial Hospital. From 1946 to 1966, he was Chairman of the Department of Medicine at Chicago Wesley Memorial Hospital. Dr. Rhoads has been a member of the medical faculties of Rush Medical College and Northwestern University Medical School.

In presenting the Distinguished Alumnus Award, Dr. Olwin, a member of the medical staff of Presbyterian-St. Luke's Hospital since 1942, said of Dr. Rhoads, "It is apparent that he has fulfilled all three of his early callings: of medicine, journalism, and the ministry—goals which in themselves tell much of the character of the man. In these three areas of endeavor, the welfare of the individual has ever been the primary motivation of his thinking and action, and of all the professional people I have known, he most nearly approaches the fulfillment of the ideals expressed in the Oath of Hippocrates."

Tolbert Fanning Hill, M.D., Special Guest at Commencement

The nation's oldest living physician, 105-year old Tolbert Fanning Hill, M.D. an 1896 graduate of Rush Medical College proudly walked to his table amid a resounding standing ovation for this honored guest at the Alumni Association's Commencement Banquet. Coincidentally, it was Rush's 105th Commencement.

Dr. Hill, who practiced medicine in Athens, Illinois until five years ago, was presented with a special medallion inscribed "To a



Tolbert Fanning Hill, M.D., tours Medical Center with Bruce Campbell, Vice President for Administrative Affairs.

beloved alumnus, keeper of the Rush tradition." The medallion was presented to Dr. Hill by Harold Byron Smith, Jr., Chairman of the Medical Center's Board of Trustees and Joseph Cline, M.D. '79. Joseph Cline is also from Athens, Illinois, where the Hill and Cline families have been closely associated for many years.

Dr. Hill is one of five brothers who graduated from Rush Medical College in the 1880s and 1890s. Their father and uncle were also physicians, as well as Dr. Hill's son, grandson, nephew and grandnephew.

Nurses Alumni Association Events

Over 40 members of the class of 1929 were honorary guests at the Annual Nurses Alumni Association Homecoming Tea and Banquet. In all, over 250 nurse alumni participated in the activities, which included tours of the hospital guided by nurses from the Quality Assurance Program.

Joyce Stoops, R.N., M.S., President of the Nurses Alumni Association, presented the Achievement Award of the Alumni Association for meritorious achievement and contributions to the association, to Marie Steinke, R.N., M.S., Assistant to the Director, Quality Assurance Program.

The newest members of the Rush-Presbyterian-St. Luke's Nurses Alumni Association, graduates of the class of 1979, were officially welcomed into the association at a breakfast given in their honor June 6. Special guests at the breakfast included James A. Campbell, M.D., President of the Medical Center and Luther P. Christman, Ph.D., R.N., Vice President for Nursing Affairs and Dean of the College of Nursing.

Ruth Johnsen, R.N., A.M., member of the board of directors



Claude N. Lambert, M.D., Professor Emeritus in Orthopedics, greets two 1929 graduates from St. Luke's School of Nursing.

for the alumni association and Director of Admissions for the College of Nursing, spoke to the group about the history of the hospitals and nursing schools that are the foundation of Rush-Presbyterian-St. Luke's Nurses Alumni Association. Joyce Stoops introduced the 1979 winner of the alumni association award, Bionnie Lynn Buzzelli. The award is given annually to the outstanding graduating nursing student. Stoops also offered her congratulations to all the graduates, saying that the "depth, breadth and character of each member adds to the association's whole."

Rush Surgeons Return To Campus

Over one hundred Rush Medical College and Presbyterian-St. Luke's House Staff alumni visited the Medical Center during this year's Clinical Congress of the American College of Surgeons. L. Penfield Faber, M.D. and over thirty current and emeritus staff members welcomed guests in Room Six Hundred following a brief walking tour of the construction, from the vantage point of the fifth floor of the Academic Facility. This was the first in an expanded program of alumni ac-

tivities in conjunction with professional society meetings.

During November, at the American Academy of Ophthalmology, William E. Deutsch, M.D., acting Chairman of the Department of Ophthalmology hosted a reception for alumni at the San Francisco Fairmont Hotel. Fifty of our alumni and their guests enjoyed a pleasant evening discussing activities at Rush and were joined by two Alumni Trustees of the Medical Center, who also specialize in ophthalmology—R. Joseph Olk, M.D. '75 and Wayne W. Wong, M.D., '40.

Dates For Your Calendar

Tuesday, April 22, 1980

Alumni Reception and Riverboat Dinner Cruise in conjunction with the American College of Physicians Annual Meeting.

New Orleans Hilton Hotel
New Orleans, Louisiana

Friday, June 6, 1980

Alumni Day

1980 Commencement Plans Announced for June 6 and 7, 1980

Paul J. Patchen, M.D. '30 and Steven Gitelis, M.D. '75 have accepted Chairmanship for this year's reunion and commencement plans for Rush I and Rush II respectively.

In addition to the traditional celebration for the 50-year Class (RMC '30), the Rush Classes of 1935, 1940 and 1975 will be invited to celebrate their respective anniversaries, during a day-long program at the Medical Center, which will include special presentations, the Annual Meeting of Rush Medical College Alumni Association and tours of the Medical Center.

The day's activities will culminate in the Alumni banquet to welcome the Class of 1980 and honor the Class of 1930.

Saturday, June 7, 1980

2:00 p.m.—Rush University Commencement

The Advantages of Planned Giving

Throughout your career you provide for the security of yourself and your family—through life insurance, acquired property, and investments of various kinds. But you realize that—primarily because of taxes and the tax implications of your investments and holdings—your actual spendable assets *and* the amount of security you want to pass on to your descendants in your estate are both restricted. Because of this situation, you also feel restricted in the amount of gifts by which you want to benefit people close to you and institutions such as Rush. If these facts are at all typical of your own situation, you are not alone. Many people, especially those with highly appreciated stocks or property, find themselves likewise constrained in the amount of benefits they can set aside for their families, their retirement, or the charitable institutions they wish to perpetuate.

Planned giving is one way of solving these problems and securing these benefits.

There are several ways to give that allow a donor to fulfill his or her philanthropic goals and also provide lifetime benefits—such as *guaranteed income* for the donor and other beneficiaries—that are essential to adequate estate planning. All of these methods carry with them tax advantages—such as savings on income tax, capital gains tax, and estate tax—that make significantly large gifts possible. For instance, there is no limit to the gift or estate tax charitable deduction. Therefore, the larger the estate, the greater the opportunity for philanthropy and, because estate taxes are graduated, the greater the tax benefits to the estate.

The following are opportunities for planned giving to Rush-Presbyterian-St. Luke's:

The Gift by Will

Providing for the Medical Center in your will is a foresighted way of expressing your philanthropic preferences. This method should be evaluated as the first step in planned giving. It allows control of assets during life and still assures that philanthropic intentions will be accomplished.

The Charitable Remainder Unitrust

The Unitrust not only provides you with a sizable income tax charitable deduction but also frees you of all capital gains tax. A fixed percentage of the trust assets is guaranteed to you, the donor, and to a second beneficiary, if you desire, as *lifetime income*.

The Charitable Remainder Annuity Trust

The Annuity Trust provides the same tax advantages as those of the Unitrust. It also guarantees a *lifetime income* of a fixed dollar amount per year of at least 5% of the initial value of the trust.

The Charitable Gift Annuity

The Gift Annuity not only gives a guaranteed *lifetime income* but also provides that part of the income is *tax-free*. It also allows for a sizable income tax deduction and reduced capital gains tax.

The Pooled Income Fund

The Pooled Income Fund allows for a variety of smaller and larger gifts in an investment pool, which guarantees *lifetime income* to donors according to the proportional number of their *shares* in the pool.

The Gift of Life Insurance

The gift of a new or existing life insurance policy allows the donor to *create* a substantial gift to the Medical Center irrespective of his or her present assets or estate.

*Excerpt from the Rush-Presbyterian-St. Luke's Medical Center publication **Planned Giving** which discusses tax and other advantages of the various methods of planned giving.*

*You may secure free copies of **Planned Giving** or information concerning your individual situation and desires by writing or calling:*

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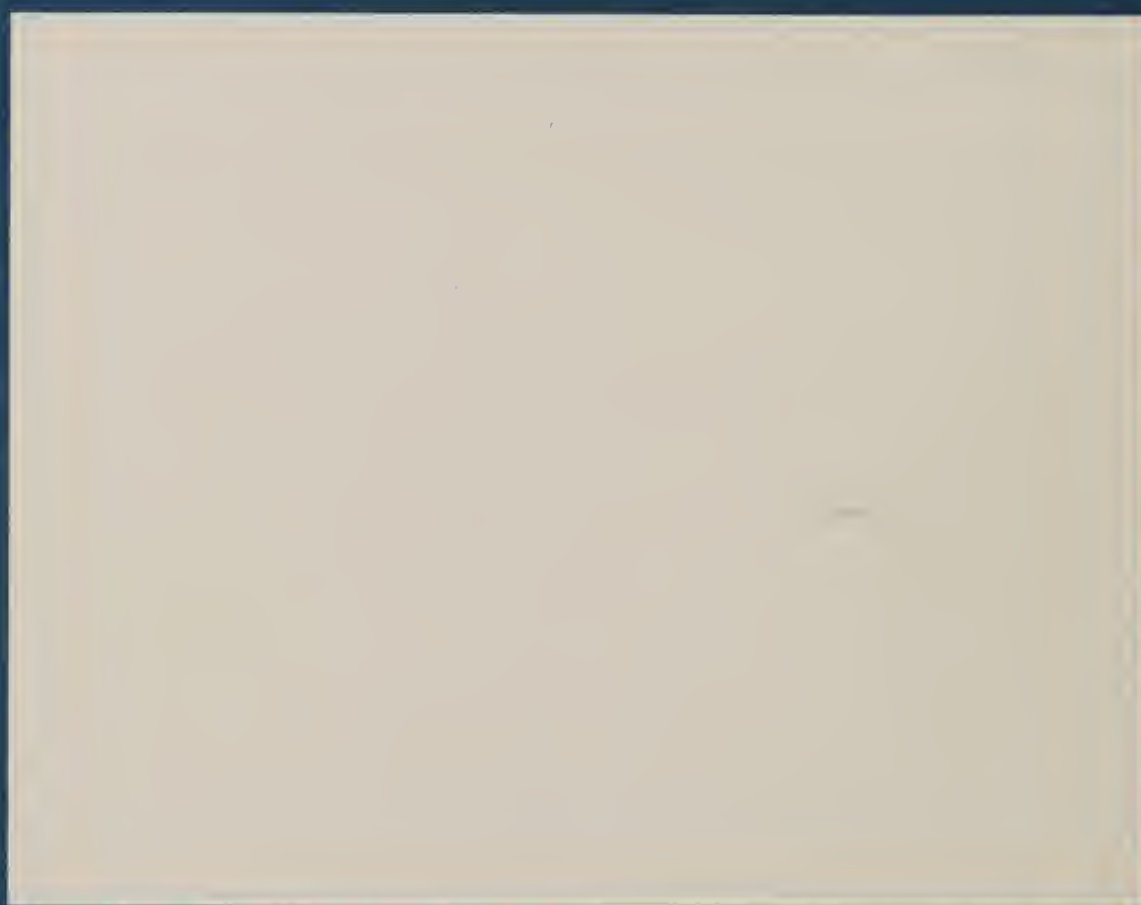
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Rush-Presbyterian-St. Luke's Medical Center

The Magazine

Rush Volunteers in Thailand



FALL 1980

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On the cover: Nancy Roberts, wife of RPSLMC trustee Thomas H. Roberts, Jr., joined Rush medics in Thailand earlier this year. She is shown with children at the Khao-I-Dang refugee camp.



Rush Medics in Thailand

by Carolyn Reed

On December 8, 1979, twelve medics from throughout the Midwest left Chicago's O'Hare International Airport bound for the border camps of Thailand—Khao I Dang, Bon Nam Samet and Mak Mun—where hundreds of thousands of Cambodian refugees have fled to escape the turmoil of their war-torn country and to seek desperately needed food, shelter and medical care.

Nearly half the team was personnel from Rush-Presbyterian-St. Luke's Medical Center: Donna Pratt, M.D., a Rush Medical College graduate and ANCHOR staff physician in obstetrics and gynecology; George Johnson, C.R.N.A., an instructor in the nurse anesthesia program; Lisa Polley, R.N., and Karen Bong, R.N., then both Labor and Delivery nurses, and Noy (Noopoth) Stievo, R.N., Surgical Nursing, a June 1979 Rush College of Nursing graduate and Thai by birth.

Each took an unpaid leave of absence from the Medical Center. They were sponsored by the Chicago-Minneapolis-based American Refugee Committee (ARC). Senior Attending Physician John Long, M.D., Department of Obstetrics and Gynecology, is an American Refugee Committee board member and posted the initial notice about the team in his department. Those who signed up agreed to serve at least 8 weeks.

Looking back, all agreed they left with a strong sense of adventure and not a little anxiety. "My first impulse was to grab my nursing textbooks and start studying," said Lisa Polley. "I was worried because I didn't know what sup-

plies there would be," said Dr. Pratt. "Without medical supplies, your hands are tied, you can't do very much for the patient except first aid."

George Johnson was thrust into the role of supply officer as soon as he arrived. "All of a sudden I was in charge of the pharmacy and the food supplements," he said. "I didn't know where anything was. I didn't know anybody. It was like being thrown into Presbyterian-St. Luke's on your first day and being told, 'You're in charge of the entire pharmacy'."

George thinks he adapted fairly quickly due in part to the hectic nature of his job as a nurse anesthetist at Rush. "The operating room is in constant motion. I knew if I could survive the organized chaos of a major metropolitan hospital, I could survive anywhere!"

Accompanying the group—using her own funds—was Nancy Roberts, wife of Rush-Presbyterian-St. Luke's Medical Center Trustee, Thomas H. Roberts, Jr. She and her husband have long been involved in Southeast Asian relief



George Johnson, C.R.N.A., examines an infant as other children look on.

of the village where the refugees
ven the smallest children (fore-
) are put to work.
photo.



WBBM-TV Anchorman Bill Kurtis covered work of Rush volunteers as part of a special TV report on Cambodia. He is shown with (from left) Lisa Polley, R.N., Mary Beth Miller (St. Anne's Hospital, Chicago), Donna Pratt, M.D., and (kneeling) Karen Bong, R.N.

work and are currently caring for four Vietnamese children. Mrs. Roberts spent five weeks touring all the camps, documenting the team's efforts and assisting in a non-medical capacity.

"I was amazed and proud at how quickly they adapted to the primitive conditions and the situation," recalls Mrs. Roberts. "Thanks to their talent and training, they can handle anything they have to."

The team worked seven days a week from 8:00 a.m. to 5:00 p.m. with periodic night duty. Each morning they arrived by van from the nearby town of Aranyapathet where the team was housed. The medics each saw up to 100 patients a day, afflicted with a variety of tropical illnesses. Nearly all suffered from serious malnutrition and/or war-related injuries.

The American Refugee Committee is responsible for a 100-bed ward of a 1000-bed refugee hospital. The camp at Khao I Dang houses over 100,000 refugees—mostly Khmer Serei or anti-communist, "free" Cambodians—and is about seven miles from the Thai-Cambodian border.

Some team members travelled periodically to camps just on the border—to Mak Mun and Bon Nam Samet—where fighting between Khmer Serei and Khmer Rouge (communist) soldiers frequently broke out. Nurse Lisa



George Johnson, C.R.N.A., (left) and Donna Pratt, M.D., (right) pose with a Cambodian refugee.



Noy Stievo, R.N., with a young patient in one of the camp's wards where beds are often shared by entire families.



Polley spent three hours in a bunker on one visit to Bon Nam Samet.

"A baby was having convulsions," she recalled. "We'd started an I.V. and were aspirating the baby when the shelling began. We were all on the floor and all the time I was thinking as we were working on the baby, 'This isn't really happening to me'."

The team was eventually evacuated and the baby was saved, but the fighting left 200 persons wounded and the clinic was looted and destroyed. "We took most of the wounded back to our hospital," said Lisa, "and within several weeks the clinics were rebuilt and the medical teams were back at work."

The strength and stoicism of the refugees, as well as the tenacity of the medics are reflected in many of the stories the team brought back. Dr. Pratt observed, "It was hard to tell if somebody was really in pain because they just didn't complain."

"And even if someone died the family would thank you for what you did, bury their dead and go on living. Death is a part of life... they've been living with it so long they just accept it."

Nurse Noy Stievo recalled the valiant fight of one man against meningitis. Yet as he fought, she fought too, fighting the illness and her own fear. With her husband, Craig, a former Peace Corps worker (who joined her at the camps late in her tour of duty), she

Rush Medics were impressed with the "strength and stoicism" of the refugees who live in crowded, primitive conditions.



cared for the man all through her night shift though it was inevitable he would die.

"He was brought in unconscious at 5:00 p.m., just after everyone else had left. He was having two seizures an hour so I gave him dilantin (an anti-convulsant medication) and sent Craig to look for more," she said. "A doctor arrived after midnight but by then the seizures had stopped so he didn't stay.

"I pulled up another bed next to the patient and we sat there. Every time he arrested we'd resuscitate him. We kept him alive all night."

The patient lived through the next day and night before he died on the second morning. "He looked so strong...he had a wife and three little kids," she lamented, then continued, "Sometimes you got scared for yourself. I mean, I wanted very much to help but with such lethal diseases all around I didn't want to die." Noy said she watched at least ten of her patients die. "I've never had anyone die at Presbyterian-St. Luke's Hospital."

Dr. Pratt expressed similar dismay and a sense of frustration. "I was completely out of my element, handling critically-ill patients without cardiac monitoring, CDP lines, without biochemical lab studies. You couldn't make a diagnosis...a lot of it was guesswork." Though she welcomed the lack of paper work, she confessed the greatest frustration was the handicap in trying to learn from experiences. "You couldn't sit down and review the chart or review the lab data to find out if you've made an error. That has a good strong effect on how you practice medicine—it's how you learn."

Lisa Polley, R.N., and a new-born refugee.



For most of the medics, however, the experience of working in the refugee camp, under primitive conditions, with limited or uncertain supplies, was a confidence builder.

For George Johnson, a critical test of his skills came one night during an emergency operation. A woman who had been hemorrhaging from a ruptured uterine artery for several days was brought in from the French OB tent. The surgeon on call hadn't done a hysterectomy since residency and George hadn't typed blood by himself since high school.

"I just guessed, we were pulling at straws, I mean, here's a patient hemorrhaging to death at 3:00 o'clock in the morning.

"The bottom line was it was a very crude operation but the surgeon made it and I matched enough blood and she made it.

"I felt very competent."

Lisa Polley's skills were also put to the test on several occasions and she exhibits a new sense of confidence in her nursing skills. "I always felt competent but difficult cases used to fluster me, especially if things didn't go as planned," she said, "Now I've handled complicated cases—like patients with seizures—and I know I can do it."

Many cases the medics handled were familiar to them only through their textbook education. Malaria,

meningitis, tetanus and leprosy are rare in the United States. One patient on Lisa's evening shift was having trouble breathing. "He sounded like he was under water," she recalled, "and I thought to myself, 'I seem to remember reading in my medical nursing book that this could possibly be pulmonary edema.' So I gave him aminophylline (a drug used to stimulate respiration)."

Worried she had not made the correct diagnosis, she went to find a doctor. "Finally he came and looked and said, 'you did the right thing, he doesn't need anything else,' and walked right out."

On another occasion a woman with severe asthma was not responding to the drug Lisa had given, so she found a *Physician's Desk Reference*, checked the dosage and upped it to near the maximum allowable with an I.V. push. The woman responded.

"At Rush, they don't spoonfeed you," Lisa says in retrospect. "One thing they taught us (in the College of Nursing) was how to find out if you don't know. You have to have your own initiative to do well at Rush and I think that helped me at Khao I Dang."

All four medics who returned to Rush (Karen Bong is now working at another Chicago hospital) have expressed a strong desire to return, though it appears only Lisa will



Rush medics care for a patient under watchful eyes of other refugees

before the year is over. George, Noy and Donna are back at work in their former positions (Donna has begun work on a master's degree in public health) and are much changed from their encounter with a war-torn culture.

For despite the adventure and excitement, fulfillment and new friends, all agreed their work with the Cambodian refugees was ultimately a sobering experience.

"Most of the time, when you see someone die here, it's not a senseless death," notes George, summing up feelings shared by all the medics. "More often than not it's an absolute last chance—usually the result of some catastrophic incident.

"Americans have it so good: we have food, shelter, good health care. We often don't realize how really fortunate, we are." ☺

Postscript: As this publication goes to press, Lisa Polley has returned to Thailand for a 5-month tour of duty. And the border war continues.



Karen Bong, R.N.



George Johnson,
C.R.N.A.



Lisa Polley, R.N.



Donna Pratt, M.D.

A GENERATION AT RUSH— 1964-1984

By Bruce Rattenbury
Assistant Vice President
Philanthropy and Communication

It is estimated that Rush-Presbyterian-St. Luke's Medical Center through its patient care programs each year directly touches the lives of some 350,000 people—one out of every 25 in the Chicago metropolitan area population of 7.5 million—to say nothing of the impact of thousands of health professionals either trained at or in training at Rush University, or of the collective contribution of the dozen community hospitals linked together in the Rush System for Health.

Given the size of Rush's "extended family" and the pace of development at the Medical Center, it is reasonable to assume that a sizeable number of people may be interested in an account of progress in recent years and in what Rush will be up to in the future. Maybe we can begin by recalling the explanatory note to "The Adventures of Huckleberry Finn" in which Mark Twain advises us that he has used a half-dozen different dialects in the book. It wasn't done in a haphazard fashion or by guesswork,

Twain said, but was based on personal knowledge and painstaking research. He then went on to say that he offered this explanation because "without it many readers would suppose that all these characters were trying to talk alike and not succeeding."

At the most recent annual meeting of the Trustees, James A. Campbell, M.D., president of Rush-Presbyterian-St. Luke's, made a presentation of four different periods in the history of the Medical Center. "They comprise 20 years—a full generation in the old-fashioned sense," he said, and, echoing Twain, "even though in some respects these periods may resemble each other, I hope I will succeed in making it clear that each of them is really quite distinct from the others."

A discussion of highlights and achievements during three five-year spans—1964-1969, 1970-1974, and 1974-1979—provided an historical perspective. The future was addressed in a discussion of the five-year period beginning in



The Medical Center of the 1960's.

1980 and for which the Trustees adopted a blueprint for action called the Corporate Strategic Plan. In this first year of the new plan:

- The Trustees have approved a 1980-81 budget of \$220 million, a five-fold increase over the \$43 million operating expenses of a decade earlier;
- Philanthropy, upon which the Medical Center depends for its margin of excellence, reached the \$60 million mark in the \$75 million campaign, 80 percent of the goal in 80 percent of the campaign period, a correspondence so eerily precise as to prompt a nervous recheck of the figures (followed by a relieved sigh);
- Daily occupancy of patient facilities for the first time passed the 1,000 mark and, at this writing, had gone as high as 1,023 patients; and
- At the June 1980 commencement Rush awarded its first doctor of philosophy and its first doctor of nursing science degrees.

Rush obviously isn't sitting still for its portrait, statistical or programmatic, and is moving determinedly into the five-year period that began in 1980 and which will end in 1984. As Dr. Campbell said:

"That's right. Nineteen eighty-four is just five years away. While the nightmare future of George Orwell is not materializing exactly as he foretold, there has been justification for a sleepless night now and then. Big Brother has begun to watch us, and he seems to become more and more involved in our personal lives as well as our institutional lives and will continue to do so. Despite this, we face the future with confidence and with a good deal of excitement."

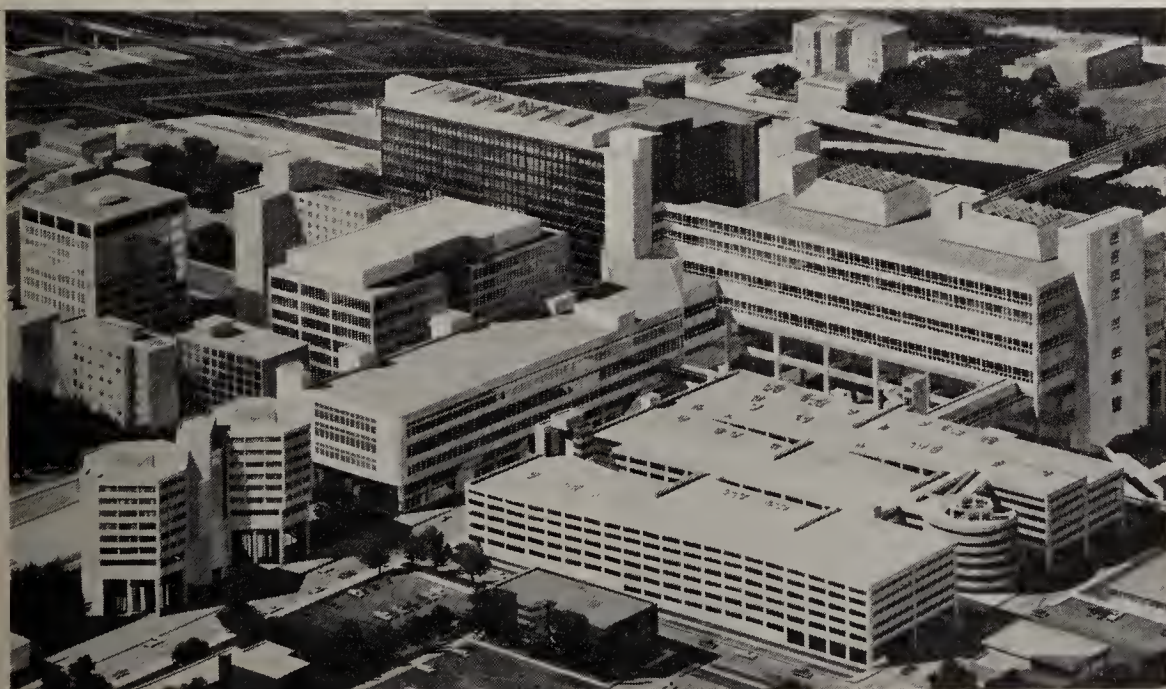
The reasons, he indicated, were to be found in the past, beginning with the years 1964-1969. In our national life, these were years of great social change and turmoil. Lyndon B. Johnson had been elected president and announced his program for the Great Society. Civil rights were on the march at

home, and we as a nation were getting deeply involved in Southeast Asia. The low point was the striking down of our national leaders in the streets. The high point, both literally and figuratively, was landing Neil Armstrong on the moon.

For the health industry, these were years of change and of considerable progress. The Surgeon General issued his report on smoking and health. A vaccine against German measles was introduced. We saw the arrival of Medicare and Medicaid in Public Law 89-97 which got the government into the role of insurer for health care, covering more people than any other legislation since Social Security was passed in the 1930s. Many changes in these years could be summed up in the words "access" and "entitlement."

How did Presbyterian-St. Luke's Hospital respond to the special environment of the mid- to the late '60s? In 1964 there was a major corporate reorganization and for the first time a physician was elected president to succeed John Bent who had given superb leadership to the institution over many years.

In 1964, Presbyterian-St. Luke's was a good-sized quality institution, a hospital with an excellent medical staff and with a solid core of scientific staff. There were 161 physicians and fellows in graduate medical education that year, and about 100 students were graduated from the diploma nursing school. There was only one endowed chair, but an especially significant one: the Jean Schweppe Armour Chair in Neurology, the first endowed chair in a hospital in the country. Remodeling of the Rawson and the Senn buildings was underway. Jelke-Southcenter was about 90



The Medical Center of the 1980's.

percent completed. The first five floors of the Professional Building were on the verge of completion.

In addition to traditional care, the hospital responded to the special needs of its community through the establishment of the Mile Square Health Center. Mile Square soon became an autonomous corporation, proudly owning a \$3,500,000 outpatient facility and continuing to work effectively and closely with the Medical Center as one of its affiliates.

Highlights of the clinical program during that period were reflected in two major events, made possible through giant strides in medical technology: Presbyterian-St. Luke's performed the first heart transplant in the city and the hospital's first kidney transplant also took place.

Academically, far-reaching changes were underway. A national advisory committee, then including Robert Glaser, M.D., now of the Kaiser Foundation, and Julius Richmond, M.D., later Surgeon General of the United States, was established to help the leadership of the hospital think out major issues of education confronting it. The administration was forced to grapple with hard decisions about the School of Nursing, and the decision to close the school was made in 1968. At about the same time, a 25-year contract with the University of Illinois to train its medical students at Presbyterian-St. Luke's Hospital was drawing to a close. Meanwhile, Dr. Campbell and others at Presbyterian-St. Luke's were working with the State Board of Higher Education to develop recommendations to be implemented by the private sector as well as the public sector in all areas of health education.

In 1968, the hospital was approached by the trustees of Rush



(Clockwise) Academic Facility, Jelke South-Center, Kellogg Pavilion, new patient care wing under construction.



Twin Towers of Johnston R. Bowman Health Center for the Elderly



The Sheridan Road Pavilion

Medical College and asked to assume responsibility for their charter. George B. Young headed the hospital's Trustees' Academic Committee and in 1969 came in with his report. The findings of that group and of the National Advisory Committee were recorded as follows:

"Stop worrying. Stop trimming your sails to try to get along with somebody else. You actually are one of the distinguished institutions in the country. Go it alone, at least for the time being. You will find people beating a path to your door after you get going..."

And so in October of 1969, the merger of Rush Medical College and of Presbyterian-St. Luke's Hospital took place, establishing the current corporation. The year closed out with trustee approval of Phase I of the Medical Center's long-range plan for facilities development.

Before moving on to the next five years, some notes on philanthropy are in order. Starting with one endowed chair in 1964, six more were added by 1969, including the Woman's Board Chair in Pediatrics, the first such chair in the United States. It was during this period that the trustees also decided to develop a proposal on care for the aged to the Bowman Trust, with an outcome to be noted later in this article. And on the same day as the Blizzard of 1967, the hospital learned that certain trusts had come to fruition, bringing the hospital \$1,500,000 in unrestricted funds. "Now that's my kind of blizzard," Dr. Campbell said.

The next five years, 1970-74, can be characterized in the national life of this country as a period of growing suspicion and mistrust of government. It was also a time of

Past and present construction at Medical Center: (Top) Academic Facility; (Center) helicopter helps position heavy equipment; (Bottom) Professional Building addition.

considerable recession, materially affecting progress in a number of areas. The nation had achieved its space goals, or was acting as if it had, and support by the federal government of biomedical research began to fall off.

The health industry ran into its first price controls, controls that stayed on during most of this five-year period. The issue of access to health care began to shift to the issue of adequate health manpower. The national effort to produce more doctors, begun in the late 60's, was reaching its peak. The Academic Facility of Rush University was, in fact, one of the last projects to qualify for federal support, but now federal subsidies to medical students began to erode.

For the 1970-74 period, Rush-Presbyterian-St. Luke's set forth ambitious goals. They called for opening a medical school and other health-related colleges, implementation of programs with affiliated hospitals, a geriatrics program and center, replacement beds for the Jones and Murdock buildings, a new academic tower, mental health beds, ten more endowed chairs, and another addition to parking facilities. All of these goals were reached or are being reached.

There were other accomplishments. In the area of clinical care, Harold Byron Smith, Jr., as chairman of the Trustees Health Care Planning Committee, in 1971, made a presentation to the Trustees regarding the proposed patient care network designed to serve one to one-and-a-half million people, and asked for approval to begin nego-



tiations with other hospitals. By 1974, eight hospitals were affiliated with the Medical Center. That same year, the State of Illinois named the Medical Center one of the regional perinatal centers in the state, to care for high-risk newborns and high-risk mothers. In 1971, Rush began its own health maintenance organization, ANCHOR. The Medical Center continued to remain in the forefront of utilization of advanced technology, and in 1974 acquired its first brain scanner, also one of the nation's first.

Parenthetically, Cook County Hospital had two of its regularly-recurring crises in this period—in 1970 and 1971. Rush took the initiative in putting together a program to meet them. It developed a plan calling for the city to be divided into various zones for hospitals to pledge to accept patients from within their neighborhood boundaries; all but five hospitals went along with this plan.

Academic programs, meanwhile, were getting up to speed. In 1971, Rush Medical College opened to accept its first students, including many transfer students from other medical schools. In 1972, a new College of Nursing and Allied Health Sciences was announced and, in November of that year, the trustees ratified creation of Rush University. In 1973, Rush Medical College graduated its first students in three decades. That same year it introduced a program of educating first-year medical students at Knox College, inaugurating a similar program at Grinnell College the following year.

The Phase I facilities program, begun in 1969, was completed in 1973 at a total cost of \$23,500,000. In this phase, the final two floors were added to Jelke-Southcenter,

and six more were added to the Professional Building. A parking garage for 1,500 cars was constructed. During this period, the Chicago Foundlings Home building was purchased with money received through gifts honoring Marshall Field IV, to be used for the Medical Center's burgeoning psychiatry program. With the endowment of the Stanley G. Harris, Sr. Chair of Psychiatry, Rush was able to persuade Jan A. Fawcett, M.D. to come to the Medical Center and provide leadership in that area.

Phase II of the modernization-expansion program was opened in 1973, with the State of Illinois approving allocation of \$2,100,000 to the Medical Center District Commission to acquire the Alden's property for Rush's use.

The years from 1975 to 1979 are easy to summarize. On the national scene inflation was the major fact of life. In the health field, the issue of access had almost disappeared. Cost containment had become the paramount issue so far as the government was concerned. The Health Systems Agencies, the third generation of local planning bodies—this time with teeth—were established, to provide for review and regulating authority. The "certificate of need" process was born of the impulse toward cost containment. Government reimbursement formulas became more restrictive.

During these five years, there was established a third college of Rush University, the College of Health Sciences including a Graduate School. The network of liberal arts colleges and universities grew to 15 institutions in six states. Rush University enrollment leaped from 66 students to over a thousand. The University received a 10-year

accreditation, the maximum possible, from the North Central Association. The Academic Facility was completed and dedicated (the elevated trains slowed down but did not stop as Mayor Richard Daley spoke) and today it is not only operational but is demonstrating its flexibility for new student uses.

Even more spectacular were advances in patient care during these five years. Facilities development included acquisition of the Sheridan Road Pavilion, now integrated with the Medical Center's programs, the construction of the Johnston R. Bowman Health Center for the Elderly, establishment of the Joseph and Helen Regenstein Eye Center, the Sleep Disorder and Research Center, and the expansion of the ANCHOR Organization for Health Maintenance which now has 40,000 members and six offices in Chicago and the suburbs.

Program development included establishment of the John L. and Helen Kellogg National Center for Excellence in Nursing. A quality assurance program in nursing was developed and implemented at Rush and adopted nationwide by other institutions. The work begun in 1974 was reflected in 1979 statistics: 87 percent of the nurse force of 1,200 are registered nurses, and 70 percent have baccalaureate or higher degrees. In other areas, a Multiple Sclerosis Center and the Isaac Ray Center in forensic psychiatry were established. Two more scanners were acquired. The old health center clinics were phased out and replaced by independent individual group practices and individual practices in a variety of settings.

The patient care network continued to expand. In the past year, Grant Hospital of Chicago, Skokie

Valley Community Hospital and Copley Memorial Hospital in Aurora joined the Rush network, bringing the total number of patient care affiliates to 13 and of beds to more than 5,000 in Illinois.

Outside awards for support of research came to over \$8,000,000 in 1979, with 734 projects, 122 in cardiovascular and 96 in cancer

Rush System for Health Patient Care Network

- Bethany Hospital
- Central DuPage Hospital
- Christ Hospital
- Community Memorial General Hospital
- Copley Memorial Hospital, Inc.
- Galesburg Cottage Hospital
- Grant Hospital of Chicago
- Mile Square Health Center, Inc.
- Mt. Sinai Hospital Medical Center
- Rush-Presbyterian-St. Luke's Medical Center
- Schwab Rehabilitation Hospital
- Skokie Valley Community Hospital
- Swedish Covenant Hospital
- West Suburban Hospital

Academic Network

- Beloit College
- Carleton College
- Coe College
- Colorado College
- Cornell College
- Fisk University
- Grinnell College
- Illinois Institute of Technology
- Knox College
- Lake Forest College
- Lawrence University
- Macalester College
- Monmouth College
- North Central College
- Ripon College

research. The medical staff continued to distinguish itself on the national scene. James A. Schoenberger, M.D., Chairman of Preventive Medicine, is President-elect of the American Heart Association; Maynard Cohen, M.D., the Jean Schweppe Armour Chairman of Neurology, is President of the American Academy of Neurology; Joseph V. Messer, M.D., is President of the Chicago Chapter of the American Heart Association; Janet Wolter, M.D., is President of the Chicago Unit of the American Cancer Society; and Richard Buenger, M.D., Chairman of Diagnostic Radiology, has been elected a director of the Radiological Society of North America.

Modernization of the Medical Center continued. Over the past five years, \$39,000,000 of the Phase II program was completed and a \$154,000,000 Phase III program was begun.

To summarize the momentum of 15 years at Rush-Presbyterian-St. Luke's:

- Assets increased from \$66,500,000 to over \$300,000,000.
- Revenues increased from \$22,000,000 in 1964 to \$172,000,000 in 1979.
- House staff and fellows went from 161 in 1964 to 350 in 1979.
- Blood transfusions which were 12,000 in 1964 were 29,040 in 1979, an indication of the intensity of illness cared for at the Medical Center.
- Named chairs went from one in 1964 to 27 in 1980.

In 1871: faculty and students of Rush Medical College in ruins of school building after great Chicago fire.

The foregoing account has benefited greatly from being able to deal in specific accomplishments. It conveniently ignores the inevitable disappointments and makeshift arrangements (later christened planning) in the life of any institution that now and then settles for a half of a loaf when the whole is in doubt. Flexibility to deal with changes in the health, financial or regulatory scene clearly has been an essential component of the management philosophy of the Medical Center. This said, it seems equally clear that institutional planning has been a reliable guide to what would take place in the future, and will continue to be so.

In January of 1979 an *ad hoc* committee of the Trustees was charged with developing a corpo-



rate plan for the next five years. While the plan encompasses every unit of the Medical Center and exhaustively covers such major areas as management, patient care, manpower, research, and system development, there were no surprises or sharp changes of direction. It's major thrust is for "more of the same" with fine tuning as we move forward, plus increased emphasis in several developing areas.

Based on its own analysis, Rush has made projections about the environment in which it and other health care institutions will be functioning over the next five years. The population of the Chicago Metropolitan area, as well as nationally, is growing older. "There doesn't seem to be any indication that there are going to be many more of us," Dr. Campbell said, "but we are going to age." The Johnston R. Bowman Health Center for the Elderly, of course, anticipates and makes some provision for this development.



In 1973: Rush Medical College students on construction site of present Academic Facility.

The plan also forecasts an increased demand for mental health services, underscored both by the 1978 Report from the President's Commission on Mental Health as well as the Chicago Health Systems Agency study on the same subject. Recognizing that urban situations spawn emotional problems and will require urban solutions, the Trustees believe that the proposed Institute for Living is an idea whose time has come programmatically.

The document charting the future directions of Rush-Presbyterian-St. Luke's, pruned of housekeeping details, includes the following in its Goal Summary.

Management

Financial and economic viability, with particular attention to maximizing use of existing resources, is fundamental. Management at all levels and in all areas will be held accountable for achieving increased operating efficiencies in patient care, research and educational activities. Corporate planning processes and evaluation of existing programs will be developed and refined. Implementation of a comprehensive management information system will be a high priority (and will draw upon the success of the Spectra system installed at Sheridan Road Pavilion and being expanded at the main campus).

Patient Care

Private solo and private group practice will continue to be the principal methods of delivery of care at Rush. Management will



More than 1,300 persons attended Academic Facility dedication in 1976.

continue to reinforce the Medical Center's preeminent position as a referral center for specialized diagnostic and treatment services. There is a reaffirmation and commitment to providing personalized primary and secondary care services, for more resources to programs in aging and mental health, and for targeted expansion of ANCHOR to 88,000 members over the next five years with multiple sites linked to affiliated hospitals.

Manpower

Active pursuit of effective programs for recruitment and retention of manpower will include creative application of financial incentives (loans, scholarships, premium pay) for nursing personnel, and development of physician/nurse joint practices. The number of residency positions at Rush and its affiliates will be brought into balance with the number of graduating medical students with respect to geographic and specialty mix.

While the size of the entering Rush Medical College class has stabilized at 120 students, there will be expansion of enrollment at all levels in both the College of Nursing and in the College of Health Sciences, and some expansion of programs in the Graduate School.

Research

Excellence in research programs in the basic and clinical sciences and in health care delivery will continue to be promoted. Greater emphasis will be placed on incentive mechanisms to encour-



Library of Academic Facility has view of Chicago's skyline.

Civic Leaders Shared in Medical Center Milestones of Last Two Decades

Illinois Governor James Thompson (in hard hat at center) at groundbreaking for new patient wing, to be completed in early 1982.

1978 Civic Tribute to Medical Center: Board Chairman Harold Byron Smith, Jr., former President Gerald Ford, James A. Campbell, M.D., President of RPSLMC, and past Board Chairman Edward McCormick Blair.

Senator Charles Percy (left) congratulates Nathan Kramer, President, ANCHOR Corporation, on the health organization's receipt of federal qualifications.

Hon. Margaret Thatcher, later prime minister of Great Britain, observing EMI chain scanner, the first in Chicago, during visit to Medical Center.

Chicago Mayor Jane Byrne is briefed on RPSLMC plans by Dr. Campbell and trustees Frederick G. Jaicks and Roger E. Anderson.

Campbell and the late Mayor Richard J. Daley at dedication of the Academic Facility.

Former Chicago Mayor and Mrs. Michael Mandic, with JRB Medical Director Rhoda Pomerantz, M.D., (left) and Dr. Campbell, dedication of Johnston R. Bowman Center for the Elderly.



RUSH-PRESBYTERIAN-ST. LUKE'S MEDICAL CENTER A RECORD OF GROWTH

	1964	1969	1974	1979
BEDS.....	856	838	850	1,187*
ADMISSIONS.....	28,861	27,194	28,211	31,115
PATIENT DAYS.....	280,322	286,307	287,969	336,100
EMERG. RM VISITS.....	13,944	23,322	25,238	32,544
OPERATIONS.....	13,564	13,909	14,656	15,287
TRANSFUSIONS.....	12,465	12,269	17,550	29,040
MEDICAL STAFF.....	305	310	422	690
INTERNS, RESIDENTS AND FELLOWS.....	161	252	241	350
RUSH UNIVERSITY STUDENTS.....	Non-Degree	Non-Degree	66**	1,007
EMPLOYEES.....	2,597	3,775	4,563	6,602
ENDOWED CHAIRS.....	1	7	20	26

*Includes beds at Sheridan Road Pavilion and Bowman Health Center for the Elderly

**1973 enrollment of Rush Medical College only

age and reward competitive research, while management will continue to explore and pursue availability of grants and other funding to support research development.

System Development

The Rush System of Health will complete the quantitative phase of its structural development. Existing affiliations and relationships will be evaluated based on commonality of interest and agreements will be renegotiated appropriately. It is expected that greater emphasis on the functional development of the network will be reflected in a greater flow of patients, dollars and manpower among network institutions. Management will, as it has in the past, continue to encourage other systems of this type to develop in metropolitan Chicago.

Rush believes its programs for the future conform to a correct

reading of public expectations and trends. It believes the American public will continue to expect high quality, personal and compassionate health care and that there will be a continued preference by individuals to select their source of care. As the public becomes increasingly aware of the impact of environmental and social factors on health status, there will be also more emphasis on the individual's responsibility for his or her own health. At the same time the momentum toward governmental regulation of hospitals and cost containment efforts will continue, sometimes resulting in mixed signals to the health care community. How are we going to address the anomaly of steady technological advances, including CAT scanners, while governmental cost containment measures seem to be designed to keep them from being fully utilized? Can the health industry respond without falling into

the trap of being solely anti-regulation? Will other health care institutions and systems adopt, as Rush has, a "fair share" approach to the problem of the medically underserved?

In presenting the corporate plan to the Trustees, Dr. Campbell said, "In some respects, it assumes that others will see the humaneness and rationality of our program and will respond cooperatively. If they are unable or unwilling, then of course we will have to reassess our position. Our program is a planned and compassionate response to the health needs of our community. We can implement it only by maintaining the strongest possible policy as regards the integrated resources of Rush-Presbyterian-St. Luke's. Nothing must be permitted to compromise them...and nothing will!"

©



Growing Medical Center campus provides space for student joggers.

VITALITY

"The vitality of Chicago has much to do with why we decided to stay in the city," declares Dr. James Campbell, president of Rush-Presbyterian-St. Luke's Medical Center that is in the midst of a \$154,000,000 modernization program on Chicago's west side.

"We are optimistic about Chicago," adds Campbell. Part of that optimism stems from private support for the medical center. "The city that works is also the city that cares," says Campbell. "The commitment from both individuals and the corporate community in Chicago has been tremendous. Executives from major businesses volunteer to work on our board because they truly care about this place and the city."

That commitment has helped Rush-Presbyterian-St. Luke's grow into one of the nation's foremost academic medical centers—complete with colleges in medicine, nursing and health sciences as well as extensive research programs and a wide array of patient care facilities.

The sheer scope of the Rush system adds up to patient benefits in Campbell's view. "Medical technology is constantly reaching higher levels of sophistication. The more we do, the more knowledgeable we become, and that translates into better, more effective treatment. There's definitely safety in numbers."

If Rush-Presbyterian-St. Luke's is a key institution in the world's largest medical center complex, it is just one reason that Chicago ranks in the forefront of the nation for medical care, teaching and research. Says Campbell: "There are many great medical resources in the entire Chicago community—with superb complexes on the Midway and on Superior Street, among others."

The quality of medical care in Chicago. Another shining asset in a city brimming with vitality. Chicago. Diverse. Powerful. Progressive. With a gross metropolitan product that outstrips all but 13 countries in the world. With a solid economic base—because no one industry contributes more than 13% to the area.

It's the world's number one convention center. Home of five stock/commodity option exchanges. Key to the country's rail and trucking system.

Chicago. A city that never quits. A market that never stops growing. And always in Chicago, there's one medium that brings it all together.

The Chicago Tribune.

James A. Campbell, M.D.
President,
Rush-Presbyterian-St. Luke's
Medical Center

Dr. Campbell is a graduate of Harvard Medical School and is National President of Alpha Omega Alpha Honor Medical Society.

Under his leadership which began in 1964, the medical staff of Rush-Presbyterian-St. Luke's has increased from 305 to 690 physicians, and the total number of employees from 2,600 to 6,600. Rush University's three colleges and graduate school now enroll over 1,000 students, plus 350 residents and fellows in graduate medical education. Endowment has doubled to \$41,000,000 and the number of endowed chairs has increased from one in 1964 to 26 today.

Prior to becoming president, Dr. Campbell was chairman of the department of medicine. In addition, he has served in a variety of other medical and teaching posts—including Dean and Professor of Medicine at Albany Medical College, Union University, and Professor of Medicine at the University of Illinois.



We must all become amphibians again...

Selections from the Commencement Address

By Harriet Sheridan, Ph.D.
Dean of the College,
Brown University



E.B. White once said, "When I arise in the morning, I am torn by the twin desires to reform the world and to enjoy the world. This makes it hard to plan the day." I am faced with the same dilemma at commencement time.

Knowing that I was coming here to speak to you, I sought the advice of the medical program faculty at Brown and of the graduating class of physicians, about what my subject ought to be: I got two kinds of advice that added up to E.B. White's dilemma. Some said this was the day to unbridle the pleasure principle and to speak unrestrained by administrative habits of caution about how hard your struggle had been, how noble your success, and how promising your future.

Surrounded as you are by your colleagues in science, by your admiring relatives and friends, and by your impoverished parents, on the brink of plunging into careers in healing arts and in scientific research, this is a moment to savor. No talk today in a morose humanistic fashion about the world's "sea of troubles" against which you must take arms, or of "ignorant armies that clash by night." Instead, what Aristotle would have described as an epideiche address, furnishing a ceremonial recognition that you had reached a stage of achievement in your lives.

Others of my advisors said that this would be the last chance at reform: that as health scientists, nurses and physicians, you would be entering into a fragmented and dehumanized world of isolated organs—of hearts and digestive tracts, of hypochondriacs and neurotics—and that what you needed to be reminded of was that it is not enough merely to sew a patient up and to tell him to take up

his bed and walk, but you must also convince him to want to live. A heavy responsibility, and one not likely to bring cheer to your lives by its contemplation today.

It was also proposed that this might be a good time to expatiate on the value of communication skills (that jargonistic term for the ability to write the lucid prose of Lewis Thomas as you record your patients' histories on their charts). Accordingly, I reviewed an article by Dr. David Shepherd, President of the American Medical Writers Association, in which he advises physicians to read and imitate Shakespeare, the master of short concrete nouns, the active voice, and vigorous verbs. His statement found its echo in comments by Dr. Franz Ingelfinger, editor-emeritus of the *New England Journal of Medicine* and by Dr. William R. Barkley, editor of the *Journal of the American Medical Association*—you see how familiar I am with all these medical chaps—and, in a prescription for those who hope to get their research published, to take large doses of Somerset Maugham, William Carlos Williams, and Rene DuBos.

But it seemed to me that some attention has already been paid to the development of your abilities to write clearly, to use language at a level considerably higher than that of Washo, the chimpanzee. One has only to read the splendidly articulate essay by Adrienne LeBailly in the Winter 1979 issue of *The Magazine* (of Rush-Presbyterian-St. Luke's Medical Center) to discover the high level at which you all characteristically write.

In an effort to resolve the conflicting advice about subject matter I turned finally to a veteran physician, a radiologist, alumnus and trustee of Brown, who go

Harriet Sheridan, Ph.D., born in New York City, attended Hunter College, majored in English, became Phi Beta Kappa, and graduated cum laude. She earned the master's degree and doctoral degree in Medieval History and Philology at Smith College and Yale University, respectively.

Accompanying her husband, who taught English at Carleton College, she elected to have a second career in child psychiatry, but an unforeseen circumstance redirected her to teaching English. At Carleton College she rapidly ascended the academic and administrative steps to become Professor of English, the Andrew W. Mellon Professor of Humanities, Chairman of the Department of English, and, finally, Dean. Moving East in 1979, she became Dean at Brown University in Providence, Rhode Island.

She is a member of many national committees and societies concerned with the humanities in education. At the 1980 Commencement of Rush University, she was presented the honorary degree of Doctor of Humane Letters.

down to basics: "Tell them," he advised, "that technology is making them all obsolete."

Now, I regard this as typical of medical advice. Such advice is generally expressed briefly, is indifferent to the tender sensibilities of the patient, and results in a nasty-tasting medicine. So it gives me great pleasure to offer it to you here today.

However, humanist that I am, I cannot leave well enough alone, but am compelled to offer a few embellishments. As my radiologist advisor amplified it, when he listened to the speeches at his own commencement some 39 years ago, he had little forewarning that his professional future was lying in wait for him with soundwaves and isotopes. It is certainly true that there is scarcely a profession or occupation that has not been radically altered within the past few decades.

On the other hand, the danger of obsolescence is demonstrably reduced by the ability of the organism to adapt to changing circumstances. Scientists who are imbued with the humanistic values derived from the study of history, literature, philosophy, religion, and who will practice what they preach, are the scientists who will survive all seasons and command all technologies. We must all become amphibians again.

Moreover, I do not believe that technology is the villain, but rather it is the slow and inexorable encrustation brought about by indifference to individual needs, to the blind mouths that clamor, and by contented thinking that what we know is all that we ought to know—dangers for all professionals.

What the humanities can do to prevent this is to teach us to be self-critical by their example. The

society-at-large has a vested interest in the clarification of its own culture, in the development of values and language expressive of the ordering of its consciousness, in the elaboration of those inferences for action and conduct which the logic of that consciousness presumes, and in keeping an open perspective on what that consciousness would currently disparage or ignore. The complex interplay of understanding, interpretation, and criticism shows up in the work of the historian, the philosopher, and the literary critic. Because studies of the humanities have as their goal the understanding, the interpretation, and the criticism of the creative works of humankind, they furnish useful guides for our own self-analysis and understanding.

But this is mere assertion rather than argument; moreover, it's one that you expect me to make. You were wondering when and how the defense of the humanities would come. Let me make the argument instead: The earliest-known description of a physician in English literature occurs in the Prologue to Chaucer's *Canterbury Tales*, a work written in the fourteenth century. As Barbara Tuchman has observed with a certain morbid good cheer, that age was remarkably like our own, afflicted as it was with the classic riders of the Apocalypse—famine, plague, war, and death—a combination of catastrophes that produced an epidemic of violence, depopulation, bad government, oppressive taxes, the breakdown of social distinctions, working-class insurrection, monetary crisis, the decline of morals and rise in crime, the decay of the ruling class, and, above all, the corruption of society's central institution, the



Church, whose loss of authority and prestige deprived the Western world of its traditional guide in an ever-gloomier world. I am describing the fourteenth century, you understand, not the twentieth.

The Hundred Years' War was a forerunner of ours, though we scarcely seem to realize the perils of our own contemporary continuum. The medieval grotesquerie of mad and arrogant rulers has its counterpart today around the world. The rampant lawlessness, aggravated by the Black Death that carried off an estimated one-third of the population within two years and led to riots and witch burning, finds a counterpart today in the presence of local vigilantes determined to maintain order by any means in their own communities.

Against such a dark background, the image of Chaucer's physician appears:

*"In al this world ne was ther noon
hym lik
To speke of phisik and of
surgerye, ...
He knew the cause of everich
maladye,
Were it of hoot, or cold, or
moiste, or drye,
And where engendred, and of
what humour;
He was a verray parfit practisour
The cause y-knowe, and of his
harm the rote,
Anon he yaf the seke man
his bote."*

[In all this world, there was no one equal to that physician. To speak about medicine and surgery, he was truly a perfect practitioner. He knew all the causes and all of the remedies of every illness, and so he could give the sick man his remedy.]

*"Wel knew he the olde
Esculapius,*

*And Deiscorides, and eek Rufus;
Old Ypocras, Haly, and Galien;
Serapion, Razis, and Avicen;
Averrois, Damascien, and
Constantyn;
Bernard, and Gatesden, and
Gilbertyn..."*

[A learned man was he, well-versed in the law of Galen, Averroes, Aesculapius, and Hippocrates.]

*"Of his diete mesurable was he,
For it was of no superfluitee,
But of greet norissing and
digestible...
In sangwin and in pers he clad
was al,
Lyned with taffata and with
sendal..."*

[Stately, well-dressed, and well-disciplined, he ate very sparingly; he drank very little. Everything that he had in his diet was nourishing and digestible.]

Yet, as much as Chaucer admired him for his technical expertise, he didn't really like him:

*"And yet he was but esy of
dispense;
He kepte that he wan in
pestilence,
For gold in phisik is a cordial,
Therefore he lovede gold
in special."*

There is something a little cold-blooded about this physician who is represented as an example of those members of the profession who fraudulently practiced fee-splitting, and who, partly because the Church was antagonistic to medical research (the study of practical anatomy in the universities was explicitly forbidden), had a reputation for atheism. "His studie was but litel on the Bible," is the way Chaucer put it.

The modern consciousness of the physician, the image with

which doctors, indeed all medical people, extending even to all scientists, struggle, has been laid down in those brief lines. Chaucer's physician is cast as the type of those who know a lot, whose knowledge may even be plucked from that forbidden tree, but whom we watch closely, observing what they do with that knowledge, suspicious that it is less for the common profit and more for their own.

Writing recently to the issue, in an article entitled, "When Science Becomes a Public Venture, to Whom Is the Scientist Accountable?" Phillip Handler, President of the National Academy of Sciences, observed that as a result of recombinant DNA research, the public became sufficiently alarmed to persuade a federal agency to intervene in order to determine which experiments might be legally undertaken.

Some critics took the position that as soon as the scientist could see a possible connection of present work to an evil outcome at some future date, no matter how remote, that scientist should abandon the field. A Nobel laureate immunologist said, "It is a hard thing for an experimental scientist to accept, but it is becoming all too evident that there are dangers in knowing what should not be known." This view is, of course, rejected by Dr. Handler.

Robert Oppenheimer, in a speech before the Association of Los Alamos Scientists, about political and scientific consequences of the atomic bomb and prospects for arms control in the post-war world, argued that, "If you are a scientist, you believe that it is good to find out how the world works, that it is good to find out

what the realities are, that it is good to turn over to mankind at large the greatest possible power to control the world and to deal with it according to its likes and values." So Handler maintains that, "in the long run it is impossible to stand in the way of the exploration of truth." Yet he concludes, and this is a very important conclusion, "For better or worse, the terms of a new social contract between the scientific community and the larger society are now being forged."

Because of ancient, even atavistic, suspicion about Faustian omniscience uncontrolled by human conscience, as well as the perception of the enormous scale on which scientific research is now conducted and supported, the new social contract is one that will contain some clauses dealing with internal mechanisms, with the critical appraisal of the deeds that knowledge may lead to, and with assurances that our scientists are imbued with a sensitivity to the effects of their actions that mere technicians may lack.

A single course in biomedical ethics, for example, may not be enough. Human awareness, in both its objective and subjective aspects, is a dynamic, changing complex of sense impressions—feelings, attitudes, memories, imagination, images, ideas, opinions, desires, baby cries—all brought together by a unified intellectual consciousness and focused commonly on the concrete, the individual and the sensible.

The scientist, customarily taking an intellectual approach to human consciousness, first particularizes his subject matter and then sees it generalized into de-humanized theory. "There's something comforting about being in a field with

absolutes," an intern leaving for a career in medical research said recently. For him, science is "out there," and knowledge can be measured and developed by correlatives, *de facto* generalizations, experimental verification, and mathematical modeling.

The method of the humanities is selective. It does not simply record full human experience; it removes the trivial and the irrelevant and focuses on the humanly important aspects of life. *St. Augustine's Confessions*, for example, does not merely detail the events of Augustine's daily life and digestion, nor does it focus exclusively on his intellectual and religious pilgrimage. Rather, it presents a particular life in such a way that a deep comprehension, not only of his life, but of human life itself, is expressed. His life becomes an analogy of our own life, not indirectly through the medium of a set of abstract generalizations, but directly, through the interpretation of concrete and particularized assimilation. We never lose sight of the real person who is the origin of the narrative, yet we can say that Augustine's problem is our own problem.

Thus, the geography of the humanities is in our hearts and minds. We use the humanities to take the dimensions of everyday life that tell us the measure of who we are, what we are, and how we may become something more.

Now, in turning to the humanities—to literature, for example—to find guides for life if not for health, we should recognize that we are turning to fiction, not to fact. In an open letter to Lillian Hellman and Mary McCarthy that Norman Mailer saw fit to publish in *The New York Times Book Review* in order to accomplish their reconciliation

(Mary McCarthy having said about Lillian Hellman on the Dick Cavett Show, "I said in an interview that every word she writes is a lie, including 'and' and 'the'" and Hellman having filed a suit for defamation), he makes the point that, "No writer worthy of serious consideration is ever honest, except by accident." Of course Lillian Hellman is dishonest. So are Mary McCarthy, Norman Mailer, Saul Bellow, John Updike, John Cheever, Willa Cather, Edith Wharton, Henry James—"we're all dishonest. We exaggerate, we distort, we use our tricks, we invent. After all, it is almost impossible, even writing at one's very best, to come near the truth." The theologian, Dietrich Bonhoeffer, expressed the problem of knowing a complex whole in this comment, "Telling the truth is not solely a matter of moral character. It is also a matter of correct appreciation of real situations and of serious reflections upon them. The more complex the actual situations of a man's life, the more responsible and more difficult will be his task of telling the truth."

Both scientist and humanist are, of course, in search of truth, and not incompatibly. In a brilliant recent essay, "The Rage to Know," published in the *The Atlantic*, Horace Freeland Judson reports an annoyed comment made by the physicist, Philip Morrison, who said, "I feel very reluctant to give any support to descriptions of the scientific method. The scientific enterprise is very difficult to model. You have to look at what scientists of all kinds actually do." And another comment made by Sir Peter Madower, "Scientists are building explanatory structures telling stories which are scrupulously tested to see if they are



stories about real life."

But Judson seems to me to overstate needlessly the case for scientific accomplishment when he proclaims that science is our century's art. While it may be that the rage to know is matched by the technological urge to make, a further necessary part of the equation, the rage to interpret what we know and what we make, is furnished by humanistic accomplishments. Art is this century's art. Science needs no defense in a corruption of definition.

Shakespeare's *King Lear*, a drama about an arrogant ruler abused by two calculating daughters, and thinking himself abused by a third loving daughter, maddened by despair, and finally, in a moment of epiphany, recognizing himself for what he had become, is not a true account, but an analogy of truth. Lear's speech to his cruel daughter Regan, who would deny him even one attendant, teaches more about the helplessness of senility than many a recent textbook:

*"Oh, reason not the need: our
basest beggars
Are in the poorest things
superfluous:
Allow not nature more than
nature needs,
Man's life is cheap as beast's:
Thou art a lady;
If only to go warm were
gorgeous,
Why, nature needs not what thou
gorgeous wear'st,
Which scarcely keeps thee
warm. But for your true need,
You heavens, give me that
patience, patience I need!
You see me here, you gods,
a poor old man,
As full of grief as age; wretched
in both!
If it be you that stir these*

*daughters' hearts
Against their father, fool me not
so much
To bear it tamely; touch me with
noble anger,
And let not women's weapons,
water-drops,
Stain my man's cheeks!
...I will do such things —
What they are yet I know not; but
they shall be
The terrors of the earth. You
think I'll weep;
No, I'll not weep..."*

Surely science conflicts only with the literal, not the poetic truth, of the fictions by which we live.

Let me make a recommendation to add one more text to the reading list for your course at Rush entitled, "Physicians as Writers." At work in an age that was torn apart by scientific, political, religious, and personal dissensions, Sir Thomas Browne, son of a shopkeeper, was the product of a medical education in the three leading medical schools in the seventeenth century world—Montpelier in France, Padua in Italy, and Leiden in Holland. He became an expert anatomist, embryologist, botanist, and antiquarian, was learned in six languages, including Latin, Greek, and Hebrew, and was regarded as England's leading physician. As an apprentice physician in 1634, Browne devoted his leisure time to writing the *Religio Medici*, his answer to the question of what the religion of a doctor was. Admitting throughout his work a struggle between doubt and certitude, Browne exhibits in his discourse a mind and spirit in simultaneous involvement with both science and religion. To use Browne's own phrase, he was an "amphibian," able to live in two worlds at once, thereby exhibiting what his

twentieth century admirer T.S. Eliot called, "a unified sensibility."

The concluding section of his work stands as a model of literary prose style. Browne wrote:

*"I do not secretly implore and
wish for plagues, rejoice at fam-
ines. I rejoice not at unwhole-
some springs nor unseasonable
winters. I desire everything in its
proper season, that neither men
nor the times be out of temper.
Let me be sick myself if some-
times the malady of my patient
be not a disease unto me. I
desire rather to cure his
infirmities than my own necessi-
ties. Where I do him harm or no
good, methinks it is scarce honest
gain, though I confess 'tis but the
worthy salary of our well-
intended endeavors. I am not
only ashamed but heartily sorry
that besides death, there are
diseases incurable. Yet not for my
own sake or that they may be
beyond my art, but for the general
cause and sake of humanity,
whose common cause I appre-
hend as my own, I boast nothing,
but plainly say we all labor against
our own cure. For death is the
cure of all diseases. There is no
universal remedy I know but this,
which though nauseous to
queasy stomachs, yet to pre-
pared appetites is nectar and
pleasant potion of immortality."*

The reading and pondering of works like these give humanists their extraordinary strength of character, in proof of which I want to call to your attention the fact that here I have been for all this time with doctors, nurses and health scientists, and I have not once, in spite of this unparalleled opportunity to get medical advice, discussed with you my symptoms.

I want to wish you happy reading and Godspeed.

Commencement 1980



Commencement 1980

Representing the highest levels of scholarly attainment, Rush University conferred doctoral degrees in all three of its colleges at the June 7, 1980 Commencement exercises. It was the first time since the establishment of Rush University in 1972 that all three colleges presented candidates for the highest degrees authorized.

In addition to 121 doctor of medicine degrees to Rush Medical College graduates, two doctor of philosophy degrees (in immunology) were conferred upon College of Health Sciences students and one doctor of nursing science degree to a College of Nursing student.

Other degrees awarded by Albert B. Dick III, representing the Board of Trustees, and James A. Campbell, M.D., President of the Medical Center, were 59 master of science degrees in nursing, seven master of science degrees in clinical nutrition, 109 bachelor of science degrees in nursing, and nine bachelor of science degrees in medical technology. All told, 308 degrees were conferred.

Harriet Sheridan, Ph.D., Dean of the College, Brown University, received the honorary degree of doctor of humane letters. Dean Sheridan gave the commencement address "We Must All Become Amphibians Again..." She was presented by C. Frederick Kittle, M.D., Director of the Rush Cancer Center and Professor in Rush Medical College, who described Dr. Sheridan as having credentials "as impressive as her personality is charming."

"Harriet Sheridan," Dr. Kittle said, "cares and communicates about knowledge... (and) knowledge, communication and caring are the necessary ingredients for any health care professional."

Confer First Doctoral Degrees

When Rush University held its sixth full commencement this past June, doctors of medicine weren't the only doctors in the house. The College of Health Sciences and the College of Nursing awarded their

first doctoral degrees at this year's commencement ceremonies.

Karen James and Roseanne Parciany received degrees of doctor of philosophy from the College of Health Sciences.

Dr. James did her dissertation on *Studies on the Interaction of C-Reactive Protein with Mononuclear Leukocytes*. She is currently the Acting Director of Clinical Laboratory, Department of Immunology, Rush-Presbyterian-St. Luke's Medical Center.

Dr. Parciany did her dissertation on *Studies on DNA, DNA Antibodies and Immune Complexes in Patients with Systemic Lupus Erythematosus*. She is a post-doctoral fellow at the University of Wisconsin, Milwaukee.

The first doctoral graduate of the College of Nursing is Joyce Keithley. She received a doctor of nursing science.

Dr. Keithley's dissertation subject was *Gastric Acid Secretion in Response to Total Parenteral Nutrition*. She is currently the Associate Chairperson of Surgical Nursing at Rush.

The Awards

ALPHA OMEGA ALPHA HONOR MEDICAL SOCIETY

Undergraduate membership is extended to medical students who give promise of becoming leaders in the field of medicine.

Students elected to membership in Alpha Omega Alpha, Zeta Chapter of Illinois were:

David Mitchell Appleby
*Stephan Mark Borowitz
*John Edward Buckley
Robert Arthur Chase
Neal David Epstein
*James Courtney Fackler
Paul Northrop Gorman
Donald F. Heiman
Jay Lawrence Levin
Barbara Batchu Loeb
Phillip James Maple
Carolyn Mies
*Sara Gottlieb Monroe
Richard Stephen Murray
Lois Margaret Nora

*John Torkild Schousboe
 *Neil David Smith
 Glen D. Solomon
 *Jamie Ellen Hayden Von Roenn
 *Peggy Ellen Warren
 *students installed as members in 1979.

**SIGMA THETA TAU —THE
 NATIONAL HONOR SOCIETY
 FOR NURSING —
 GAMMA PHI CHAPTER**

Membership is extended to undergraduate and graduate nursing students who demonstrate outstanding academic achievement, leadership qualities, and commitment to the ideals and purpose of the profession.

Members in the Gamma Phi Chapter are:

UNDERGRADUATE NURSING

Maria Ann Beasley
 Judy Sue Berner-Belkin
 Nancy Bydalek-Anderson
 Vicky Christensen
 Glenn Stewart Gray
 Deborah Ann Kerr
 Debra Kornfield
 Linda Adams Leslie
 Terri E. Messinides
 David Roy Pilger
 Brenda Lynne Poole
 Melinda Sidenius
 Judy Ann Temmerman

GRADUATE NURSING

Lynne Terese Braun
 Carol A. Burns
 Susan Lynne Dean
 Kathleen Dietz
 Marsha Jaroch
 Diane Judge
 Linda Monico
 Marcia Ann Pencak
 Lauretta Quinn
 Katherine Rizzo
 Joan Ros
 Kathy Schodrof
 Patricia A. Smith-Todt
 Cricket Karen Steinweg
 Martha Strening
 Diane Tieman
 Candace Wason
 Alexandra Wright
 Connie Yuska
 Nancy Kushner
 Mary Orban Mueller
 Sharon Nisius
 Susan Noble
 Jane Perry

Dorothy Soverly
 Rosemary White

THE NATHAN M. FREER PRIZE

To Peggy Ellen Warren, voted by the faculty as outstanding senior medical student. This award was endowed in 1892.

**THE HENRY M. LYMAN
 MEMORIAL PRIZE**

To Sarah L. Kennedy, the outstanding junior medical student as voted by the faculty. This award was endowed in 1908.

THE DAVID PECK PRIZE

To Ricky Allan Thomas, for the student who has made the greatest contribution to the Student National Medical Association.

**THE UNDERGRADUATE
 CARDIOLOGY AWARD**

To John Torkild Schousboe, for the graduating student who has had the best performance in a cardiology elective course.

**RUSH-PRESBYTERIAN-
 ST. LUKE'S NURSE ALUMNI
 ASSOCIATION AWARD**

To Deborah Ann Kerr, for the outstanding nurse graduate.

**THE COLLEGE OF NURSING
 DEAN'S AWARD**

To Linda Adams Leslie, for superior academic leadership in the undergraduate program.

**THE COLLEGE OF HEALTH
 SCIENCES DEAN'S AWARD TO
 AN UNDERGRADUATE
 STUDENT**

To Cathy A. Lyczak. This award is presented for outstanding academic performance by an undergraduate as chosen by the faculty.

**THE COLLEGE OF HEALTH
 SCIENCES DEAN'S AWARD TO
 GRADUATE STUDENTS**

To Laura Lucerto and David M. Simon for outstanding academic performance by graduate students as chosen by the faculty.

**THE SIR WILLIAM OSLER
 PATHOLOGY PRIZE**

To Jamie Ellen Hayden Von Roenn. This prize is given to the

medical student who has demonstrated outstanding achievement in diagnostic or experimental pathology.

**THE KELLOGG SCHOLARSHIP
 AWARD**

To Kathryn Christiansen. This award is presented for superior academic achievement by a doctoral nursing student.

**THE AMERICAN MEDICAL
 WOMEN'S ASSOCIATION
 SCHOLARSHIP AND
 ACHIEVEMENT CITATION**

To Julie Ann Freischlag, Barbara Batchu Loeb, Susan Thayer Lyon, Carolyn Mies, Sara Gottlieb Monroe, Lois Margaret Nora, Jamie Ellen Hayden Von Roenn, and Peggy Ellen Warren.

THE AESCULAPIUS AWARD

To Thomas Bleck, M.D., Resident, Department of Medicine, for outstanding resident-physician as voted by the students.

THE DANIEL BRAINARD AWARD

To Edmund Lewis, M.D., for outstanding teacher in the basic sciences as voted by the graduating medical students. Dr. Lewis is Professor of Medicine.

THE PHOENIX AWARD

To Stuart Levin, M.D., Professor of Medicine, for outstanding physician-teacher as voted by the graduating medical students.

**THE COLLEGE OF NURSING
 UNDERGRADUATE FACULTY
 AWARD**

To Joanne Disch, M.S.N., Assistant Professor of Nursing, for outstanding teacher as voted by the graduating students.

**THE COLLEGE OF HEALTH
 SCIENCES FACULTY AWARD**

To Wayne Lerner, M.H.A., Assistant Professor, College of Health Sciences, for outstanding teacher as selected by the students.

Family Birth Center Merges Home and Hospital Environment

At 2 o'clock on a Saturday afternoon, Marla and Terry Mazura checked into the suite of rooms on the seventh floor. The cozy atmosphere was welcome as neither of them had slept much in the past 24 hours.

They settled down in the living room, had something to eat and watched TV. Sitting in the rocking chair, as Terry napped on the couch, Marla glanced around her.

It was hard to believe that this suite of rooms—the Family Birth Center—was located in the heart of Rush-Presbyterian-St. Luke's Medical Center. It would be a fine, secure place for her to give birth to their first child. For right now, she and Terry had it all to themselves, just the way they wanted it.

Occasionally, Linda Fournier, R.N., the nurse in the Family Birth Center, would check on their progress. She was on call if they needed her as were all the facilities and personnel of the Medical Center's Department of Obstetrics and Gynecology.

Marla's labor had slowed down considerably which concerned her. She knew the rules. The Family Birth Center is for normal, low-risk

births. If Marla needed to have her labor induced, she would have to move to the hospital's labor and delivery rooms.

Recognizing her concern, Linda suggested she take a shower and relax. At 5:00 p.m., Marla lay down on the queen size bed in what appeared to be an average bedroom. One would never guess that the drawers in the lovely dark wood dresser contained emergency resuscitation equipment or that there were oxygen and suction outlets behind the landscape paintings on the wall.

At 5:05 p.m., Marla went into active labor. Linda's suggestion had worked. Terry and Linda were by her side. Terry was helping her, coaching her, just as he had learned to do in the classes they attended to prepare for this day. Throughout the labor, the music of Shubert, which the Mazuras had brought to the hospital, could be heard coming from the stereo speakers over the bed.

John Hobbs, M.D., Marla's obstetrician, came into the suite at 9:30 p.m. to check on her progress. Karla Nacion, R.N., of the Family Birth Center, stayed with her and Terry.

At 10:32 p.m., Marla and Terry welcomed a 6 lb. 13 oz. baby girl. Dr. Hobbs immediately gave the baby to her parents. For the next

few minutes, Marla, Terry and their brand new baby girl, Jenna Miller, rested in the bedroom, getting to know each other.

The Mazura family remained in the Family Birth Center for the next 22 hours. There were calls to make. Family members dropped by to visit. Terry took lots of pictures. Charlotte Levine, M.D., the Mazura's family practitioner, came in to examine Jenna. Marla learned about breastfeeding and everyone got some sleep.

At 9:00 P.M., the next day, Sunday, the Mazuras went home together. Karla called them from the Birth Center on Monday to see how everything was and Linda visited them at their home on Tuesday.

"It was the most wonderful experience of my life," Marla says, "Like I tell my friends, if you're having a normal delivery, it's the only way to go." E.R.

Neutron Therapy Aids Cancer Patients

In this nuclear age, researchers are bringing out the 'big guns' in the battle against cancer. The 'big gun' at the Neutron Therapy Facility at the Fermi National Accelerator Laboratory, 30 miles west of Chicago, is the world's largest atom smasher. It is now in its fifth year of use in clinical research with cancer patients.

"Although it will be a few years before there is scientific proof supporting the effects of neutron therapy, the positive results we've achieved using a beam of fast neutrons to treat certain locally advanced tumors is very encouraging," says Frank Hendrickson, M.D., Co-Director of Fermilab's Neutron Therapy Facility and Chairman of the Department of Therapeutic Radiology, Rush Presbyterian-St. Luke's Medical Center.

"Most people think of cancer as a uniformly fatal disease," Dr. Hendrickson says. "Yet, today we cure almost half of the patients diagnosed with cancer through



One of recent families using the Family Birth Center facilities.

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the various standard and experimental treatments available. We hope neutron therapy will improve this ratio."

Tumors often outgrow their blood supply rendering a portion of the tumor cells oxygen-deficient. This deficiency shields the cells from the standard x-ray treatment since x-rays have a low linear energy transfer and are less effective against oxygen-deficient cells.

Neutrons, being heavier, have a higher or denser linear energy transfer. Hence, they are more successful in killing oxygen-deficient cells often present in more advanced tumors.

"Imagine a ping-pong ball and bowling ball bouncing down the street," Dr. Hendrickson says, "and you'll have a good idea of the different impacts of an x-ray and a neutron."

More patients have received neutron therapy at Fermilab than at any other facility in the country with over 750 patients treated since the program's beginning in September, 1976.

Among the cancers being treated are localized cancers of the mouth, throat, esophagus, lungs, pancreas, bladder, prostate, cervix, bone and primary brain tumors and soft tissue sarcomas.

"Our success with the relatively small localized tumors is comparable to that of the standard treatments—x-rays, cobalt, and surgery," Dr. Hendrickson says, "so our research treatment is offered primarily to patients who have a poor outlook with these standard treatments, generally those patients with the bigger, more advanced tumors."

"In trying to get rid of the big tumors permanently, like those of the tongue, throat and larynx, with standard x-rays or cobalt, we succeed about one in three times. And that just isn't good enough."

"Our initial results with these same tumors using neutron therapy, which requires fewer treatments than standard modalities, show us succeeding about half the time. That still isn't good enough, but we're hoping that continued research will yield even better results."



Frank Hendrickson, M.D.

A unique aspect of the research going on at the Fermilab's Neutron Therapy Facility is its cooperative, regional nature.

"Often when we think of universities getting together, it's at opposite ends of a football field," says Dr. Hendrickson.

"But, we've had patients from every major academic medical center in the state, as well as some 30-plus community hospitals, not to mention the number of clinicians from various hospitals involved in the program."

The Illinois Cancer Council, a consortial comprehensive cancer center, now joins twelve regional academic medical centers and two national laboratories in integrating cancer-directed activities.

On the neutron therapy front, the Council has a grant application before the Federal Government for funding for construction of an independent, neutral Neutron Therapy Facility to be located at the West Side Medical Center, Chicago, Illinois. This specially designed clinical facility would enrich both the local and national data base on neutron therapy patients and improve access for both patients and clinicians. As with the facility at the Fermilab, this will be a cooperative, regional effort.

"Neutron therapy is still experimental," says Dr. Hendrickson, "yet,

it has shown considerable promise. In no situation is neutron therapy less effective than standard cancer treatment and in certain situations it may be better."

E.R.

RPSLMC Receives Over \$5 Million in Research Funds

Since January 1, 1980, Rush-Presbyterian-St. Luke's Medical Center has received research funds from outside sources totaling over five million dollars.

Among the largest grants was \$412,920 to the Department of Preventive Medicine, Chairman James A. Schoenberger, M.D., principal investigator, for the Multiple Risk Factor Intervention Trial (MRFIT) for the Prevention of Coronary Heart Disease. Preventive Medicine also received \$118,674 to supplement research on the Beta Blocker Heart Attack Trial (BHAT) project. Both amounts were awarded by the National Heart, Blood, and Lung Institute of the National Institutes of Health.

Notable among psychiatry awards is \$187,760 to Jan A. Fawcett, M.D., Chairman, for the project, "Efficacy of Lithium Administered to Alcoholics," from the National Institute on Alcohol Abuse and Alcoholism of the Department of Health, Education and Welfare.

Continuation of the grant for Immunological Effects on Tumor Growth and Rejection, in the amount of \$77,363, was awarded to Janet M. Plate, Ph.D., Oncology, by the National Institutes of Health. Medical Oncology also received a grant for \$126,093, awarded to Jules E. Harris, M.D., to continue the Collaborative Clinical Trials with the Eastern Cooperative Oncology Group (ECOG). The Gynecologic Oncology Group headed by George Wilbanks, M.D., Chairman, Obstetrics and Gynecology, received a new grant for \$76,000, also from the National Institutes of Health. A new grant for the Rush Cancer Center, in the amount of \$114,870, for Assessing the Effects of Counseling Cancer Patients,

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received from the National Institutes of Health/National Cancer Institute, will be administered by Laura B. Gordon, Ph.D., principal investigator.

The project on Total Surgical Replacement of the Human Hip Joint, under Jorge Galante, M.D., Chairman of Orthopedic Surgery, received continuation of funding from the United States Public Health Service in the amount of \$150,000. Also for Orthopedics, Klaus Kuettner, Ph.D., was awarded \$80,000 from the National Cancer Institute for a grant renewal on the project, "Anti-Tumor Invasion Factors Derived from Cartilage."

The Biomedical Research Institutional Support Grant from the Department of Health, Education and Welfare (HEW), National Institutes of Health was received by William Hejna, M.D. in the amount of \$131,690. The National Cancer Institute awarded James Bacus, Ph.D., Medical Automation Unit, a supplemental contract for \$356,113, with restricted income until October, 1980.

Henry Gewurz, M.D., Chairman of the Department of Immunology, was awarded \$87,027 for continuation of the grant for Studies of the Biology of the C-Reactive Proteins A112870-05, by the National Institutes of Health/National Institute of Allergy and Infectious Disease. The grant to the Neurological Sciences, with Jacob H. Fox, M.D. and Frank Morrell, M.D., investigators, for "Cerebral Decline in Aging," was renewed by the National Institute on Aging in the sum of \$132,973. A new grant from Zimmer USA was received by Marvin B. Weiss, D.D.S., General Surgery, for Clinical Evaluation of the Endosseous Dental Implant Project. The Physiology Department, with Charles Schauf, Ph.D., as investigator, received \$93,000 for continuation of its biophysics and cardiology grant. Erich E. Breuschke, M.D., Chairman, Family Practice, was awarded \$91,343 from the National Institutes of Health/Division of Medicine, for new training in the Rush-Christ Residency Program in Family Practice.

Nursing received a number of grants totaling approximately \$175,000 for various projects: the professional nurse traineeship program, under Dean Luther Christman, Ph.D., R.N., received \$77,000; Donna Rankin, R.N., was awarded over \$7,000 for a research fellowship; and Psychiatric-Mental Health-Nursing Science Graduate Training project with JoAnn Jamann, M.S.N., Ed.D., as principal investigator, was awarded over \$90,000. All awards were from the National Institutes of Health. F.G.

Study Seeks Ways To Prevent High School Athletic Injuries

Mary was in her second season of interscholastic basketball when she fell under the net and tore a knee cartilage and ligament. Mary was out for the season.

Curt was the star linebacker of his high school football team. Three games into the season, he fell during a game and dislocated his shoulder. Curt was out of action for three months.

Mary and Curt are not isolated examples. Studies show that approximately 30 percent of all high school athletes sustain injuries while in practice or during play.

What can be done to reduce the number of injuries incurred by high school athletes? A study being conducted by William F. Hejna,



William F. Hejna, M.D., observes athlete using exercise equipment.

M.D., department of orthopedic surgery, in conjunction with coach/trainers Anita Krieger and Duane Buturusis, of Riverside-Brookfield High School, hopes to find some of the answers to this problem.

Dr. Hejna, a resident of Riverside and father of three sports-minded sons, believed high school athletes weren't always getting the best attention, but if proper training programs were devised, injuries could be prevented, and injured athletes might be brought back to a functional level faster and better.

The three-year study, "The Athletic Injury Prevention and Rehabilitation Program," has been underway since December of 1979, and is sponsored by grants from the Seabury Foundation and the Dr. Scholl Foundation. Eventually, it will involve over 500 male and female high school students participating in interscholastic sports programs at Riverside-Brookfield High School. The two grants provided funds to purchase several pieces of sophisticated exercise equipment which are a central component of the study, and to undertake a statistical analysis of data collected.

"Our first concern is with prevention," Dr. Hejna says. "The study should tell us whether or not athletic injuries can be prevented by instituting sound training programs specifically designed for high-risk anatomical structures, such as the knee and shoulder. Our second concern is with finding improved methods of rehabilitative training programs once a student is injured and has clearance from his/her physician.

"A considerable body of research has been done at the collegiate and professional levels," adds Dr. Hejna, "but the greatest volume of athletes is at the high school level. Secondary school athletes outnumber collegiate athletes 25 to one, and the economic impact is very significant."

Both parts of the program have separate study and control groups with participants categorized according to their sport.

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Making use of the new equipment, exercise programs have been designed according to the needs of each participating student. Established techniques, including isokinetic, diversified variable resistance, and isotonic, are incorporated into each individual's program. Supervised workouts are then scheduled three or more times a week per student, depending on the nature of the sport and the meet schedule. Data is recorded for each participant in order to establish individual baselines and performance achievement. These include such parameters as limb girth, specific muscle group power, speed, and quickness of response.

"If a student is injured, we can tell when rehabilitation is complete by comparing post-injury performance to the previously established baseline data," Dr. Hejna says. Thus, the problem of under- or over-conditioning may be avoided."

Students are responsible for filling out data sheets, recording time spent using each piece of equipment for each specified exercise. Volunteer student technicians compile progress data by recording measurements for each athlete on a regular basis.

Dr. Hejna and the coaches from Riverside-Brookfield High School hope that the muscle-conditioning and rehabilitation programs established in the study will result in healthier, safer athletic programs for all high school students.

"It's still too early to analyze the data on any significant level," Dr. Hejna says, "but we hope to compile the preliminary findings by the spring of 1981 and publish the data on completion of the study. If the data supports our hypothesis—and I think it will—our goal is to increase the awareness of athletic staff people in high schools and junior high schools perhaps through seminars or site visits. We will also incorporate the thinking of the many fine trainers in high schools who have worked individually with these concepts in order to have ongoing improvement in the methods.

"Education is a very important

factor," Dr. Hejna says, "not only for students, but also for school administrators, coaches, trainers, parents, and the whole community. The initial investment in time and equipment is minimal compared to the impact such a program can have."

The results of the study will undoubtedly also have application for the athlete who is not involved in a high school or other organized sports program, such as young adult "weekend" athletes, and children with motor dysfunction.

"I think the average high school athlete, as opposed to the collegiate or professional athlete, is more analogous to the ordinary physical fitness-minded person whose main problem is undertraining or simply being out of shape," says Dr. Hejna. "The recent interest of John Q. Public in running, racquet sports, and other physical activities has created a new category of sports medicine problems which deserve preventive attention. It may be that one outcome of this study will be a simply-devised program for the citizen-athlete using basic types of equipment and exercises to avoid problems." A.M.

Dr. Palmer Named 1980 Distinguished Alumnus

"We have chosen to honor a man whose career could well have been the cumulative sum and output of

several physicians." The man so described is Walter Lincoln Palmer, M.D., ('21), recipient of the 1980 Distinguished Alumnus Award of the Alumni Association of Rush Medical College. In presenting the award at the Alumni Banquet during Commencement Week-end, James L. Franklin, M.D., a member of the medical staff of Presbyterian-St. Luke's Hospital and Assistant Professor, Rush Medical College, termed Dr. Palmer's career "distinguished by achievement in all areas of endeavor."

Dr. Palmer's accomplishments are both numerous and remarkable and include significant professional milestones and warm human achievements. An example of the latter was Dr. Palmer's successful effort in the 1930's to obtain the release of the famous gastroenterologist Rudolph Schindler from imprisonment in Nazi Germany.

Highlights of Dr. Palmer's professional career include leadership roles in several medical organizations. He is a past president of the American College of Physicians, has served as president of both the Institute of Medicine in Chicago and the Chicago Society of Internal Medicine, and is a past president of the American Gastroenterologic Association and recipient of the society's highest honor, the Julian Friedenwald Award. He was also a consultant to



From left: Waltman Walters, M.D., 1970 Distinguished Alumnus; Dr. Campbell and Walter Lincoln Palmer, M.D.

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the Surgeon General during World War II and has been on the National Board of Advisory for Medical Specialties. Now a professor emeritus of The University of Chicago, he spearheaded the formation of the University's renowned section of gastroenterology and served as its head.

Dr. Palmer completed his internships at Presbyterian Hospital and Cook County Hospital. He has excelled as a clinical investigator, with inquiries into the mechanisms of pain in duodenal ulcers. From 1920 to 1963, he and his associates and students published 340 publications, primarily in the area of peptic ulcer disease.

Although Dr. Palmer's accomplishments over his long career are notable, Dr. Franklin in his presentation speech strongly stressed: "...it is also necessary to convey some of Dr. Palmer's human qualities, the personality traits of modesty, clarity of thought and compassion, that make this great man worthy of our recognition."

J.L.

Kellogg Center Sponsors Symposia

"Our faculty believes that extraordinary effort must be undertaken to move the nursing profession from the periphery of the professional scene to center stage. The concept of a center of excellence in nursing encompasses the ingredients needed to attain this goal. A center of excellence does not, however, exist through mere labeling. It emerges only when the profession as a whole—as well as other professions and disciplines—acknowledge such attainment, that the claim can be justified. Even then, the institution achieving such distinction must remain on the cutting edge of the profession in order to merit true and continuing acknowledgement."

(Luther P. Christman, Ph.D., R.N., The John L. and Helen Kellogg Dean of the College of Nursing at Rush University and Vice

President of Nursing Affairs at Rush-Presbyterian-St. Luke's Medical Center.)

The John L. and Helen Kellogg Center for Excellence in Nursing—the first of its kind in the country—was established at Rush-Presbyterian-St. Luke's Medical Center through a \$4.5 million gift from the John L. and Helen Kellogg Foundation of Chicago. Its purpose is to set high professional and academic standards for nursing in order to strengthen patient care practices across the nation and in other countries.

At the time of its dedication, in October, 1979, the Kellogg Center was a package of ideas—concepts courting practice, commitments craving execution. There was much more to be done to fulfill the promise expressed in the idea of a "Center for Excellence in Nursing."

Over the past year, the same ideas that prompted the establishment of the Kellogg Center, have inspired professional interest and national inquiry.

In April, the Center sponsored its first National Nursing Research Colloquium, focusing on research being done at Rush on the patient-nurse relationship. In August, a five-day program entitled, "Colleagues in Patient Care: The Rush Nursing Model" examined the Rush model in detail and offered nursing professionals from across the nation and Canada the chance to learn about unification—a model working at Rush to strengthen the role of the professional nurse.

The Research Colloquium in April was attended by more than 75 nurses from throughout the United States. Rush University College of Nursing faculty and alumni, as well as students in Rush University's Doctor of Nursing Science program, presented results on the following research projects: "Informing Mothers about the Behavioral Characteristics of Their Infants: Effects on Mother/Infant Interactions"; "Gastric Acid Secretion in Response to Total Parenteral Nutrition"; "Patient Education Needs as Perceived by Patients and

Nurses"; "Analysis of the Concept of Empathy"; and "A Model to Study the Effectiveness of Nursing Interventions upon Maternal-Infant Interactions."

The five-day program held in August, examined key issues affecting the nursing profession today. Formal discussion topics included: primary nursing, including the serious difficulties in trying to maintain a primary nursing system in an era of severe staffing shortages; parity in the health professions, especially between administrators, physicians and nurses; the practitioner-teacher concept, where each professional should unify his or her role to include clinical practice, educational and research responsibilities; and the development of a nursing staff organization, an effort to establish a system for nursing self-governance.

Nurses, administrators, physicians and health scientists from Rush led program discussions and more than 80 nursing leaders from the U.S. and Canada attended the program.

Dr. Jerome Lysaught, Director of the National Commission for the Study of Nursing Education, presented the Commission's reports



Shown at Nursing symposium: (from left) Sue Hegyvary, Ph.D., R.N., Assistant Vice President, Nursing Affairs and Associate Dean, Medical Sciences and Services, College of Nursing; and JoAnn Jamann, Ph.D. Ed.D., R.N., Assistant Vice President, Nursing Affairs and Associate Dean, Community and Geriatric/Gerontology Sciences and Services, College of Nursing.

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and said: "Nursing at Rush, and at other institutions using the unification model approach, is head and shoulders above the level of nursing in other settings, and our research shows that Rush has moved farther than others." Dr. Lysaught is author of the Commission's reports *Abstracts for Action* and *Abstracts into Action*.

Unification in nursing, in which ultimate responsibility for nursing practice, education and research resides in one administration, is considered by some to be a model for nursing in the future. Advocates say that this combination of skills—practice, teaching and research—offers women and men the challenge they seek from a job and the level of professionalism they expect from a career.

In an article published in the June issue of the *American Journal of Nursing*, Rush is cited as one of only two institutions in the country where unification is now fully operational. H.H.

Geriatric Psychiatry Unit Opens at Bowman Center

"Mental health problems in the elderly are frequently underestimated or overlooked completely," says Lionel Corbett, M.D., Assistant Professor of Psychiatry. "Because the patients are old, many of their problems are simply attributed to 'old age' and people wrongly assume nothing can be done."

According to Dr. Corbett, certain psychiatric disorders such as depression are highly treatable in the elderly. To facilitate such treatment, a 21-bed geriatric psychiatry unit was recently opened at the Johnston R. Bowman Health Center for the Elderly. It is believed to be the first major facility of its kind in the Midwest. Dr. Corbett is the unit's Medical Director.

Patients are cared for by a multidisciplinary staff which includes psychiatrists, neurologists, geriatricians, psychologists, nurses, social workers and recreation therapists.

"Old people often have mixed medical, neurological and psychiatric disorders which require the combined skills of specialists in all these fields," says Dr. Corbett.

Depression is by far the most common psychiatric problem seen in the elderly, for a variety of reasons. "It can be caused by various drugs taken to control medical problems such as hypertension," says Dr. Corbett. "It may also be related to the many psychosocial stresses of aging or to undetected organic disease."

Paranoia, hypochondriasis, acute confusion, hallucinations, delusions, apathy (sometimes manifested by poor self-care) and disorientation and/or memory loss are also treated. The unit accepts referrals for these symptoms from physicians, family members or patients themselves.

Treatment is short-term (usually no more than three months) and includes a variety of talk and pharmacologic therapies. "One of the important things we can do here is offer a low-stress environment," says unit leader Ken Dellafield, R.N., M.N. "We take patients out of a stressful environment and offer a lot of support and understanding."

A typical case handled by the unit was that of Mrs. S. Family members thought she was becoming senile and had planned to place her in a nursing home since they could not care for her. Over a period of months she seemed to be losing her mind: she wouldn't comb her hair or get dressed; she'd forget to eat; she'd forget where she was.

"She spent all her time sitting in a chair, looking very senile, but she wasn't," says Dr. Corbett who examined her. "She was very definitely suffering from a biochemical depression." Intensive short-term psychotherapy, group therapy and carefully monitored anti-depressant medications literally brought her 'back to life' over a period of weeks. She has now rejoined her family at home and is receiving follow-up care on an outpatient basis.

"Not all cases exhibit such a dra-

matic turnaround," cautions Dr. Corbett, "but the point is these people are not hopeless."

Adds Dellafield, "We put our patients in touch with themselves; we're here to help them work through their problems, then go on with their lives." C.R.

RPSL Researchers in Mississippi Hypertension Study

"Attempting to control hypertension in America's poorest, most rural communities is a real challenge," says Edward J. Eckenfels, M.A., Assistant Dean for Academic Counseling at Rush University. "These are the forgotten communities, the forgotten people."

Eckenfels has devoted much time over the last ten years researching hypertension, its detection, treatment, and management in vastly rural, extremely poor, and medically underserved communities of Holmes County, Mississippi. He is currently one of two co-principal investigators in the Community Control of Hypertension in Central Mississippi Study (CCHCM)—a \$2.6 million, five-year investigation funded by the National Heart, Blood and Lung Institute.

The CCHCM study began in early July. It is an outgrowth of the Holmes County Research Project (HCHRP)—an extensive biosocial assessment completed in 1975 which showed, among its many findings, how endemic hypertension in a poor, black, rural community can be managed through detection and education efforts. HCHRP studied only blacks in one county, while the new project studies a five-county population including blacks and whites.

CCHCM is an inter-institutional project involving Rush University; The University of Illinois, Urbana; The University of Michigan School of Public Health; The University of Mississippi Medical School; Control Data Corporation, Minneapolis; and Central Mississippi, Incorporated, a local non-profit organization. It is directed by the principal investiga-

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tor, Dr. Dennis Frate, of The University of Mississippi, and co-principal investigators, Dr. Sidney Johnson, a private practitioner in Goodman, Mississippi, and Eckenfels.

Two other researchers from Rush-Presbyterian-St. Luke's Medical Center also are participating in the study—James A. Schoenberger, M.D., Professor and Chairman of the Department of Preventive Medicine, and Yolanda Hall, M.S., Assistant Professor in the same department. Dr. Schoenberger is responsible for the continuing medical education of the region's physicians and Hall is responsible for training local community members as health counselors.

Eckenfels and Dr. Schoenberger both were investigators in the initial HCHRP study. Its findings on the community control of hypertension were published by the Department of Preventive Medicine in 1977 and, says Eckenfels, elicited calls from countries around the world including Russia, Japan, China, and many European countries.

The CCHCM population, according to Eckenfels, has the highest cerebrovascular mortality rate and one of the highest cardiovascular mortality rates in the country. The study will demonstrate the effect on overall mortality and the cost effectiveness of a hypertension control and education effort in this rural area.

"The first study (HCHRP) showed us that using drugs and stressing diet, exercise and behavior modification as means to control hypertension was not enough. We learned that we must first look at how these people live. We must adapt our interventions to their habits, their education, their traditions and their community and family structures if we are to succeed in detecting and controlling this disease in regions where the incidence is overwhelming," says Eckenfels.

Eckenfels who spent considerable time in the field in Holmes County as a part of his responsibilities in the study, says that the



Edward J. Eckenfels

health care system there and in the five-county region surrounding it is not geared to handle the magnitude of hypertensives in the population or the management of other long-term chronic diseases.

The general poverty, vast geographical area, lack of health professionals, and episodic ailments have resulted in crisis-care rather than long-term health care planning and prevention.

In order to rectify this situation and to lower the mortality rates in this region and others like it, the CCHCM study will focus on a multi-factor approach that involves health education, epidemiology, computer application, program evaluation and community involvement.

Main activities will include: a) a hypertension screening program; b) the development of a hypertension registry; c) carrying out health education and intervention strategies comparing differing types of intervention groups; d) training and use of local community members as health counselors in the intervention program; and e) a continuing education program for physicians. Evaluation programs will be developed to measure health changes and cost effectiveness of the demonstration project. Computer-based resources will be used for training and education as well as data analysis.

In addition to the control and education efforts, an epidemiological investigation will be conducted

into genetic-environmental relationships in hypertension.

"There is something universal about dealing with high blood pressure," says Eckenfels, "especially since it has become apparent that it is a precursor to heart attacks, stroke and kidney failure. It is no longer just an isolated phenomenon. It is a concern of people everywhere and this study will be monumental with regard to understanding the etiology, detection and control of hypertension among poor, rural communities that could have considerable application in similar settings." H.H.

Coping with Medical Emergencies in the Outdoors

Many of us find our greatest moments of pleasure miles from medical aid, yet there is no single group of people who need to know more about taking care of themselves than those who venture into the forests, mountains and waterways in pursuit of their favorite pastimes, hunting, fishing, boating and camping.

Frank C. Madda, M.D. (Rush Medical College 1975), Senior Fellow in Plastic and Reconstructive Surgery at the Medical Center is an avid outdoorsman. He has hunted, fished, and camped from Hudson Bay to the Florida Keys from Ohio to Montana, and has



FRANK C. MADDA, M.D., Editor

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een and been called on to help in many back-country emergencies.

Out of this interest and experience has come a new paperback, "Outdoor Emergency Medicine." As editor and main contributing author, Dr. Madda called upon many of his colleagues at the Medical Center and elsewhere to "help make all your days outdoors as free of medical problems as possible."

Says Dr. Madda, "I have never seen a book that definitively told people how to care for themselves or others until they can get to a doctor, or how to recognize which problems need medical attention. I think this book can give the sportsman and his family a working knowledge of what to do without trying to make doctors of them. It is not

the intention of this book that its information should be used instead of seeking medical attention. The purpose is to give the correct things to do until emergency medical attention can be reached. All advice is documented as the accepted present medical emergency care both by the medical literature and by specialists in each field discussed...it tells you the right things to do when the unexpected happens outdoors in spite of your being careful." The price is \$3.95 each, plus 50¢ per book for postage and handling. If interested, write to BioService Corporation, P.O. Box 7318, Chicago, Illinois 60680. To fill the order, BioService must have your zip code, in addition to name, address, city and state. B.R.

Rush University Adds Computer-Based Education System

It can draw pictures, write in any language, even read misspelled words. It's PLATO, a computer-based education system appropriately named for the Greek philosopher/teacher, and it's new at Rush University.

PLATO is an acronym for Programmed Logic for Automatic Teaching Operation. The result of nearly 20 years of research and field testing, PLATO helps students learn by using a computer to teach and test.

Over 4,000 hours of lessons are

Four New Medical Center Trustees Elected

Announcement of the election of four new members to the Board of Trustees of Rush-Presbyterian-St. Luke's Medical Center was made by Board Chairman Harold Byron Smith, Jr.

Richard M. Morrow, President of Standard Oil Company (Indiana), and John H. Krehbiel, Sr., Chairman of the Board of Molex, Inc., were elected at the February quarterly meeting.

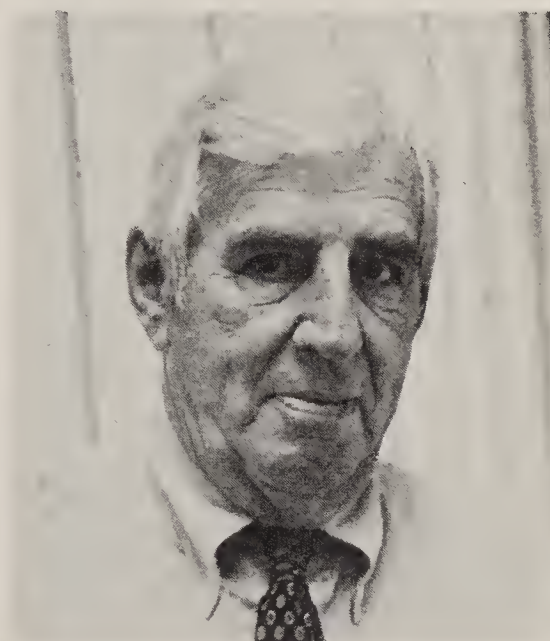
Morrow has been with Standard Oil since 1948 and was president of Amoco Chemical Corporation, a Standard subsidiary, prior to assuming the presidency in 1978. Krehbiel has been involved with Molex since its founding by his father in 1938. The company is a leading designer, manufacturer and distributor of electrical components and interconnecting systems.

John H. Bryan, Jr. and Thomas A. Reynolds, Jr. were elected Trustees at the June quarterly meeting.

Bryan is Chairman of the Board and Chief Executive Officer of Consolidated Foods Corporation. Reynolds is a top corporate attorney and partner in Winston and Strawn law firm. C.R.



John H. Bryan, Jr.



John H. Krehbiel, Sr.



Richard M. Morrow



Thomas A. Reynolds, Jr.

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available in almost every imaginable area of study. Although Rush is part of the MEDPLATO network which offers courses in the health sciences, enrichment courses are also available in everything from Chinese to dance notation.

Four PLATO terminals (type-writer keyboards attached to video screens), now in the Academic Facility's Learning Resource Center, are connected by ordinary telephone lines to the Central PLATO system located at the University of Illinois in Urbana. An additional terminal, recently arrived at Rush, can be connected either to Central PLATO, or used as an independent microcomputer system. There are approximately 1200 terminals around the country connected to the Urbana system.

According to Lisa Brenner, Ph.D., Director of Computer-Based Education, PLATO has many advantages as an adjunct to classroom instruction. "PLATO can simulate a chemistry lab through graphics and animation, let students experiment, and then tell them if they blew up the lab," explains Dr. Brenner with a smile. "In the Introduction to Zoology course, students can simulate the breeding of fruit flies in an hour instead of waiting a week. PLATO has an unprecedented graphing capability. And it can draw diagrams and pictures, and ask questions about them."

PLATO is so versatile that it almost seems human. It can even speak through devices that can be attached to a terminal to synthesize or reproduce speech for use by blind students or instructors. And although PLATO doesn't really have a sense of touch, it has the next best thing... a touch panel. PLATO might ask Jane, a first-year medical student, to identify part of a diagram by touching the appropriate place on the screen. PLATO "senses" Jane's touch, and if she points to the wrong area, the computer gives out hints until she gets it right.

Then there are the computer games with educational objectives, like "Bugs and Drugs" or "Medical



Rush student using a PLATO terminal.

Center." "Medical Center," for example, puts the player in the halls of a fictional health care institution, facing the onslaughts of a host of diseases. When sickness strikes, the player tests his or her knowledge by choosing a way to fight it. When a disease is conquered, experience points are gained and the player moves up the ladder of the Medical Center hierarchy.

PLATO is useful for more than instruction. It can be employed as an item-banking system to store test questions. Instructors can pull questions from this item-bank when constructing exams. A recently-arrived printer will enable PLATO to print out and later grade tests. Only those people listed on a special roster have access to exams stored by PLATO, so students are not able to "preview" their tests.

The new system also makes two-way communication possible, providing an additional instructional resource. Students at Rush can communicate with students from other schools in the MEDPLATO network, send messages to lesson authors when they have problems or suggestions, send and receive notes from their instructors, and participate in group "conversations."

This past fall, the medical technology program began assigning lessons from 80 available programs specifically designed for medical technology students. The department participates with 21 other medical technology programs in an association formed to share PLATO instruction and test questions. So far, the association has pooled about 6,000 questions for use by all its members.

Because of its participation in this association for sharing instruction, the medical technology program had a bit of a head start with PLATO. But even though PLATO is new to Rush, several instructors in the College of Nursing have already started assigning PLATO lessons, and some instructors in the medical college are now storing their test questions on PLATO. Others are reviewing PLATO lessons for possible use in the fall.

PLATO is fast gaining popularity with teachers and students alike. Take Scott Rubinstein for example. "I'm an addict," confesses the first-year medical student. "There are a lot of good lessons that apply to some of the courses we're taking. For example, I found the biochemistry lesson to be really worthwhile. A lot of biochemistry is memor-

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and this kind of thing is good when you have to memorize many facts and figures."

Rubinstein isn't alone in his enthusiasm for PLATO. Students at Rush logged 1600 hours of use on PLATO in the first four months the system was installed; this number did not include games, only a few assigned lessons. Since February, average use has been over 40 hours a week per terminal.

It's not surprising. After all, as one PLATO fan observed, "it's an interesting and challenging way to study." J.L.

Sherlock Holmes: Model for Clinical Diagnosis

"You know my methods, Watson..."

If Harold L. Klawans, M.D., had his way, the Sherlock Holmes stories would be required reading for all medical students.

"Holmes' technique of crime-solving is basically an analogy to clinical differential diagnosis, the idea that the observation of small details is of clinical significance," says Dr. Klawans, Professor, Rush Medical College and Senior Attending Physician, Presbyterian-St. Luke's Hospital. "The Holmes stories teach the importance of detailed observation and having sufficient knowledge to correctly interpret an observation. If Holmes

walked into a room and saw me smoking a pipe, he'd say, 'Aha, you must have recently visited such and such remote area of India, because that kind of tobacco only grows in that part of the world.' It's classic Holmes."

Dr. Klawans is enthusiastic enough on the subject to lecture on Sherlock Holmes as part of a humanities course at Rush Medical College. The author of the Holmes' stories was Sir Arthur Conan Doyle, who was not only a successful writer, but a physician, and a man of amazingly diversified talents and interests. As Dr. Klawans points out to students, Doyle's medical training had a major influence on the development of the Holmes' character. He is based on Dr. Joseph Bell, a teacher of Doyle's in medical school. Dr. Bell was a careful observer of patients who, after observation and a reasoning deduction process, would make a clinical diagnosis.

The Sherlock Holmes books first engaged Dr. Klawans' interest while he was an undergraduate at the University of Michigan. The interest grew and recently, he contributed to Sherlock Holmes "scholarship" with a new theory on the three lost years of Holmes' life (actually the years when Doyle stopped writing about Holmes because he grew tired of the character). Dr. Klawans' theory is a

variation on the hypothesis that Holmes was living in Vienna with Sigmund Freud and being treated for cocaine addiction. He is currently working on an article elaborating that theory for a Sherlock Holmes journal.

"One of the most fascinating aspects about Sherlock Holmes," says Dr. Klawans, "is the amount of scholarship expended over the years to explain the things Watson hasn't given details to understand. There's a whole pseudo-scientific study of Sherlock Holmes."

Dr. Klawans, however, is temperate in his pursuit of things Holmesian.

"I'm not a fanatic," he emphasizes. "I'm a fan who thinks Holmes can be a very useful teaching device. One of the largest deficiencies in our educational system is that acute observation is almost lost. By reading Holmes, you learn how to look at... minor deviations from normal and interpret them. That's what Sherlock Holmes did."

A student who developed a curiosity about Holmes following a Dr. Klawans' lecture might be interested to know that there is another rich resource on the subject at the Medical Center. C. Frederick Kittle, M.D., is an enthusiastic fan, not only of Holmes, but also of the shrewd detective's creator.

Dr. Kittle, Director of the Rush Cancer Center, Professor, Rush Medical College, and Senior Attending Physician, Presbyterian-St. Luke's Hospital, possesses a Doyle collection covering almost an entire wall of bookshelves, and filling three filing cabinets—a collection that includes 70 original autographed letters, books, plays, clippings, individual magazines, short stories, and even a copy of *The Return of Sherlock Holmes* in Pittman shorthand.

Dr. Kittle is an author himself, having written several articles on Doyle for various publications. In an article he wrote for the *Journal of the Kansas Medical Society*, Dr. Kittle refers to a talk given by Doyle in 1910 to an entering medical class at St. Mary's Hospital. After warning against undue material and



Harold L. Klawans, M.D. (standing) and C. Frederick Kittle, M.D.

intellectual priggishness, Doyle advised, "There is another fact which life will teach—the value of kindness and humanity as well as of knowledge. This is exactly the point the intellectual prig has missed. A strong and kindly personality is as valuable an asset as actual learning in a medical man."

"It's interesting," says Dr. Kittle, "that he made reference to the same belief we hold today, particularly at Rush, regarding the way in which we should give medical care—that the physician should consider the individual rather than just the disease."

An earthshattering idea? Not at all. In fact, it's elementary. J.L.

Aspirin Gets Mixed Reviews in AMIS Study Results

To the dismay of some researchers and much of the public, the three-year, \$16 million Aspirin Myocardial Infarction Study (AMIS) concluded that aspirin *should not* be routinely given to heart attack patients to prevent a second occurrence. Since the study's findings were released, questions have been raised regarding dosage and the timing of the aspirin regimen, but James A. Schoenberger, M.D., Chairman of the Department of Preventive Medicine, doubts whether further clinical trials are warranted at this time.

"Aspirin has a double effect," says Dr. Schoenberger. "It inhibits the generation of thromboxane A₂ (which causes clotting and constriction of the blood vessels) and that's good, but it also inhibits the synthesis of prostacyclin (which prevents clotting and dilates the blood vessels) and that's bad."

Dr. Schoenberger recommends that further basic research—as opposed to massive clinical trials—be done in this area.

"In terms of preventing secondary myocardial infarction (MI), we need a drug that inhibits thromboxane and *does not* inhibit prosta-



James A. Schoenberger, M.D.

cyclin," says Dr. Schoenberger, "or we need to know the minimum dose of aspirin to achieve this."

Dr. Schoenberger was a principal investigator on the AMIS project and chairman of its Steering Committee. The double-blind study was conducted by the National Heart, Lung and Blood Institute (NHLBI) and involved 4,524 patients at 30 clinics across the country. Each patient was given one gram of aspirin or a placebo daily for at least three years. One hundred and fifty-nine patients were from the Rush network.

Several years ago, early evidence that a daily dose of aspirin can lessen the threat of a stroke in men led some medical researchers to conclude that aspirin might have the same effect on coronary heart disease.

What the AMIS found, however, was that the death rates were not statistically significant between the 2,267 who received aspirin and the 2,257 who received the placebo. In fact, the total mortality for the aspirin group was 10.8 percent versus 9.7 percent for the placebo group. And symptoms suggestive of gastrointestinal irritation were seen in 23.7 percent of the aspirin group compared with 14.9 percent of the placebo group.

"However, if further clinical

studies are done," Dr. Schoenberger says, "they should be done early after the heart attack and with a lower dosage." Researchers speculate that a lower dosage would minimize the gastrointestinal side-effects, and there is some limited evidence that use of aspirin soon after the first MI may prove more beneficial since most patients are at highest risk for secondary MI or sudden death during the first six months of recovery.

In the meantime, RPSLMC is testing two other drugs that may prove beneficial in preventing secondary MI in those early months.

Dr. Schoenberger has completed recruiting patients for the Beta-blocker Heart Attack Trial (BHAT), a \$25 million four-year study to test the efficacy of propranolol. Rush and 32 other institutions from across the country have enrolled almost 4,000 patients in the double-blind study.

Propranolol, which has been effective in treating hypertension and angina pectoris, works by slowing the heartbeat and the heart's demand for oxygen. Volunteers who have recently had a heart attack (within 5 to 21 days of joining the study) are given either propranolol or a placebo and will be followed for at least two years. The study will conclude in 1982.

Rush has just received a \$150,000 grant to participate in the International Mexiletine-Placebo Anti-arrhythmia Coronary Trial (IMPACT). It is funded by the Boehringer-Ingelheim Company, a West German drug company, and will involve 600 volunteer patients at eight institutions (four in North America and four in Europe) in a double-blind study of that drug's efficacy for preventing arrhythmia after MI.

"AMIS was the largest, most rigorous trial on the use of aspirin in post-myocardial infarction patients," says Dr. Schoenberger, "and the investigators who carried it out feel the public should be discouraged from self-medication with aspirin. But that doesn't mean we might not find other drugs which may be quite beneficial in the future." C.R.

Establish Lane Medical Research Organization

The William Noble Lane Foundation of Illinois has established the William Noble Lane Medical Research Organization at PSLMC. The announcement was made at the quarterly meeting of the Trustees in September by Harold Byron Smith, Jr., chairman, and William N. Lane III, a member of the Board, president of the foundation named for his father, and chairman and president of Lane Industries, Inc.

The agreement became effective as of June 30, 1980. Activities of The William Noble Lane Medical Research Organization will be supported with income from the equivalent of an endowment of \$3 million. Federal law provides special recognition for a medical research organization as a non-profit enterprise which engages primarily in the conduct of medical research in conjunction with a hospital.

The Lane Foundation and PSLMC have identified mutual and substantive interests in specific research progress in the fields of Biochemistry, Behavioral Sciences, Immunology and Infectious Disease. Major emphasis in initiating the agreement will be the

active conduct of medical research in the field of Biochemistry.

The agreement establishing the new medical research organization emphasizes the mutual advantages to both the Foundation and to the Medical Center through close cooperation and communication of respective staffs. The Foundation will employ an independent professional medical research staff, members of which will be required to meet the educational and professional criteria for appointment to the faculty of Rush University, and will therefore be permitted to use all appropriate facilities of the Medical Center. The Foundation and its medical research staff have agreed to abide by the policies and procedures of the Medical Center relating to research activities.

A Joint Executive Operating Council has been established to guide and coordinate research activities of the Foundation and the Medical Center while a Joint Scientific Advisory Committee will review and evaluate proposals for specific medical research projects to be undertaken by the Foundation and also monitor and evaluate their progress.

In a resolution adopted by the Trustees, deep gratitude was expressed to the Trustees of the William Noble Lane Foundation of

Illinois "for the confidence placed in the Medical Center, and (The Trustees) take this occasion to reaffirm their total commitment to the scientific progress of medicine, a course now joined in by William Noble Lane Foundation." B.R.

Symposium Honors Dr. Sam Taylor

He was a medical student in the days before penicillin, when 60 to 80 percent of the people who were stricken with pneumonia never recovered. Polio was crippling thousands of children and young people. Tuberculosis was common, and diabetics did not yet have insulin. Doctors, who had never thought of malpractice insurance, were still making housecalls.

Medicine has come a long way since the late '20s and early '30s when Samuel G. Taylor III was attending Rush Medical College. One of the areas that has made great strides in subsequent years is that of cancer research and treatment. It's an area to which Dr. Taylor, Professor Emeritus of Medicine, Rush Medical College, and Physician Emeritus, Presbyterian-St. Luke's Hospital, has dedicated his life.

Dr. Taylor was a young endocrinologist conducting research into the nature of hormones at Presbyterian Hospital in the 1940's when Nobelist Charles B. Huggins developed a hormonal treatment for cancer of the prostate, beginning a new era of drug treatment for cancer. Following the lead of Dr. Huggins, Dr. Taylor began some of the nation's first studies in the use of hormones in treating breast cancer. In the '50s, he and his colleagues became pioneers in the removal of adrenal glands, which secrete hormones, as a treatment for breast cancer.

Today, Dr. Taylor is internationally renowned as a cancer specialist. He has been active in the American Cancer Society since 1959, serving on its Board of Directors for 10 years. He was a founder of the Illinois Cancer Council and is currently one of its directors. He was director of the first section of



William N. Lane III, Harold Byron Smith, chairman of the Trustees, and Klaus E.

Kuettner, Ph.D., senior scientist, orthopedic surgery.

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Medical Oncology at Presbyterian-St. Luke's Hospital, the first institution in the Midwest to establish such a section. Dr. Taylor is also a former associate director of the Rush Cancer Center and is currently a member of its Executive Committee. His other contributions include the founding of the Committee on Cancer at the American College of Physicians and 17 years of service as a member of the Commission on Cancer of the American College of Surgeons.

It was in honor of Dr. Taylor's lifetime of contributions to cancer research and treatment that an international assembly of researchers gathered in Chicago this spring for a two-day scientific symposium. Entitled "Hormone Manipulation in the Therapy of Human Malignant Disease," the symposium was attended by cancer researchers, oncologists, endocrinologists, hematologists and specialists in neoplastic diseases from all over the U.S., Canada, and Europe. The Section of Medical Oncology at Rush Medical College and the Rush Cancer Center sponsored the conference, which focused on breast cancer the first day and on other forms of cancer the second day.

Presentations included a look at the history of hormone therapy as a treatment of cancer, and discussions of the role of hormone therapy today. Among the distinguished participants in the conference was Dr. Huggins. His colleague, Elwood V. Jensen, also of The University of Chicago, reviewed his pioneering work in the area of hormone receptors and discussed the development of new techniques in performing assays for estrogen receptors in breast cancer tissue removed at surgery. The contributor who traveled the farthest to participate in the conference was Dr. Roar Nissen-Meyer, of Oslo, Norway.

"The Taylor Symposium was a major academic event," declares Jules E. Harris, M.D., Director of the Section of Medical Oncology, Professor of Medicine, Rush Medical College, and Course Director of the Symposium, "with international authorities on the hormone

management of human malignant disease gathering to present papers on the subject and to honor Dr. Taylor, one of this country's first and most distinguished medical oncologists." Dr. Harris is holder of a named professorship honoring Dr. Taylor.

For Dr. Taylor himself, it was more than an academic event. "I was very moved by it," he says with typical modesty. "I was wondering who they were talking about—I think they overdid me."

Whatever his thoughts with regard to his own role in the advancement of the battle against cancer, Dr. Taylor has no doubts about the role of hormone therapy as part of modern cancer treatment. Says he, "I think it's here to stay."

J.L.

Rush TV Network Expands Programming

Let's see—there's ABC, CBS, NBC—and now, RTVN. RTVN?

These are the call letters of the Rush Television Network, and it's not at all like the other networks. A closed-circuit system that recently began telecasting within the Medical Center, RTVN has a select au-

dience, specialized programming and no commercials.

Part of the BioMedical Communications Department at the Medical Center, RTVN is an educational information system focusing on two major areas: patient information via the Patient Information Network (PIN) and staff/student education. Currently, the major focus is on patient information.

The two general patient channels 4 and 13, are available free of charge to patients and their families. Channel 4 is geared toward patient education through programs on general health-related topics and on specific health problems. Some of the programs on Channel 4 include "Stress—Health and You," "Medicine Chest" (which gives information on medications that should be kept on hand), "Cardiac Comeback" (a series on recovering from a heart attack), and a series on diabetes. There is also a hospital orientation program for new patients.

Channel 13 provides patient services—televised chapel services, "video wallpaper" (slides and films of scenery with soothing musical background) and various entertainment programs similar to those seen on public television.



Lorri Bogolin, R.N., M.S.N., (left) explains RTVN to medical student David Appleby,

Terry Michelau, B.S.N., and patient Migdalia Reyes.

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patient who switched on Channel 3 might see an art exhibit, a hot air balloon rally or the performance of a *cappella* choir.

Although programming is still limited, new programs are being added continually. And in the not-too-distant future, there will be additional channels televising specialized programming to selected patient populations, such as pediatrics and obstetrics. When no appropriate programming is available on a particular subject, RTVN has access to the equipment, facilities and staff of the Biomedical Communications Department and can produce its own programs.

"In the future, we hope to be able to market some of the programming produced here," says Lorri Bogolin, R.N., M.S.N., Coordinator of PIN. One Medical Center production, the "Cardiac Comeback" series featuring a likeable cartoon character named Charlie, is already being distributed throughout the U.S.

The PIN staff is currently in the process of putting together a TV guide to be distributed to each patient. The guide will include a time schedule, a synopsis of each program, an explanation of all RTVN-related services, and a questionnaire for patients to fill out with comments on what they like and dislike about the patient network.

PIN is also planning the implementation of "Visitor Vision" for patients who are not permitted to have visitors in their rooms. Visitors will be able to switch on a TV camera set up in the volunteer office and the patient will be able to see them on the television in his/her room. Although visitors won't see the patient, they can converse via the telephone.

As the RTVN library of available programs grows, "Request TV" will be initiated. With request television, a time slot will be set aside when a patient or family member can view a particular program from the index of available programming. If a diabetic patient misses the scheduled program on insulin injections, for example, he or she could request

that it be shown again at a certain time.

Although PIN is relatively new, already the feedback from patients has been positive. "Most of our patients are telling us that the programs are very interesting and informative," says Bogolin. "But even though PIN is proving to be a useful educational tool, the health education programs are not a replacement for instruction from a patient's physician or nurse. We see television strictly as a support to individualized education—we want to assist the physicians and nurses by reinforcing their teaching."

The Patient Information Network is only the beginning. RTVN is now gearing up for a support role in staff education, continuing education and student education via a staff/student channel. Bogolin explains that if a nursing continuing education meeting is held in a downtown hotel, RTVN could videotape it and play it back for those on-duty nurses unable to attend. A safety lecture to one group of employees

might be videotaped for subsequent viewing by other groups of employees.

Another closed circuit TV system within the Medical Center, which televises surgical operations to a few conference rooms, can be expanded by a hookup with RTVN to bring those surgeries to television screens in selected locations throughout the Medical Center. Via a sophisticated camera set-up in several surgical suites, students, residents, attending staff, and other interested medical and nursing staff can observe surgery while it is being performed, or view the procedure later on videotape. A microphone activated by the surgeon will permit questions from viewers at the surgeon's discretion during an operation.

With its demonstrated potential for student education, continuing education, and staff education and the popularity of PIN (already televising 15 hours of programming a day), the fledgling RTVN appears to be on the road to success. J.L.



Members of the Rush Medical College class of 1930 who attended their 50th reunion in June: front row, from left: Leonidas Berry, M.D.; Irene Neuhauser, M.D.; Libuse K. Bliss,

M.D., Abraham Schultz, M.D.; back row, from left: Paul Patchen, M.D., Edwin J. DeCosta, M.D., William S. Hoffman, M.D., William Weiner, M.D.

The One in the Suit and Tie is a Nurse Too: It's Luther Christman, a Tradition-Busting Educator

Photograph by James DePree
Text by Giovanna Breu

"Nurses are the low men on the totem pole in the health-care system." True, maybe, but low *men*? Everybody knows that "nurse" is synonymous with "female." Tell that to Luther Christman, author of the statement above, a registered nurse himself and dean of the College of Nursing at Rush University in Chicago. Though he is one of only 27,000 males among the 1.4 million RNs in the U.S., Christman, 65, has been a leader in the campaign to upgrade the reputation, responsibilities and rewards of nursing—for both women and men. Barbara Nichols, president of the American Nurses' Association, calls him "the burr under the saddle in nursing. He is helping the profession to think."

Christman contends that "nursing was born in another culture, imported from Victorian England with no modifications. As things stand now, nurses don't have that much to contribute to medical decision-making. They certainly are not innovators." Only two-tenths of one percent of nurses have doctorates. (If in nursing sciences, it's a D.N.Sc.) He has one in sociology and doesn't mind being called "Dr. Christman."

At Rush-Presbyterian-St. Luke's Medical Center, 75 percent of the 800 staff nurses are college graduates, and 165 of them have advanced degrees. When Christman took over as dean in 1972, only a fourth of the nurses had even attended college. He adds that many of the 1,400 schools of nursing in the U.S. are "inadequate." He'd like to concentrate all those students, faculty and resources in 125 schools at the largest medical centers.

Among Christman's other ideas is a strong recommendation that the same nurses treat a patient throughout his hospital stay. "What

you have now," he says, "is a mass of nurses taking care of a mob of patients. If one deliberately set out to invent a system that would give the poorest care, he would end up with team nursing."

In some cases, Christman adds, nurses are more adept than doctors at treating patients. "Nurses are often trained in how to deal with the emotional life of patients, and this," he says, "can be extremely useful, especially in the case of imported foreign doctors who can't speak English." He also argues that in small towns and inner cities, where the doctor shortage persists, nurses with doctorates could provide basic medical care.

Nursing needs to attract new personnel, Christman says. "There's a brain drain. Years ago women had very limited career choices. Now they have so many choices that fewer go into nursing." One solution that he naturally advocates is recruiting men.

He is his own best advertisement. The son of a Pennsylvania coal drill-

er (two brothers and a sister died as infants), he left home to be a nurse's aide in Philadelphia and was graduated from the Pennsylvania Hospital School of Nursing for Men in 1939. He turned down a chance to go to medical school, took his Ph.D. at Michigan State, taught nursing at the University of Michigan, and served as dean of nursing at Vanderbilt for five years before taking over at Rush. Christman's wife, Dorothy, was a childhood sweetheart. They now live in suburban Homewood and are devoted bird watchers. Dorothy too became a nurse, as did their son; neither of their daughters took up the profession.

They aren't the only ones Christman has not won over. "A lot of people," says Jerome Lysaught, professor of medical education at the University of Rochester, "would like him to go in a corner and shut up. Luther sees the status quo as a challenge. He's never been part of the old-girl club."



Head of nursing (and nurse) Luther Christman is encircled by his staff at Chicago's

Rush-Presbyterian-St. Luke's Medical Center.

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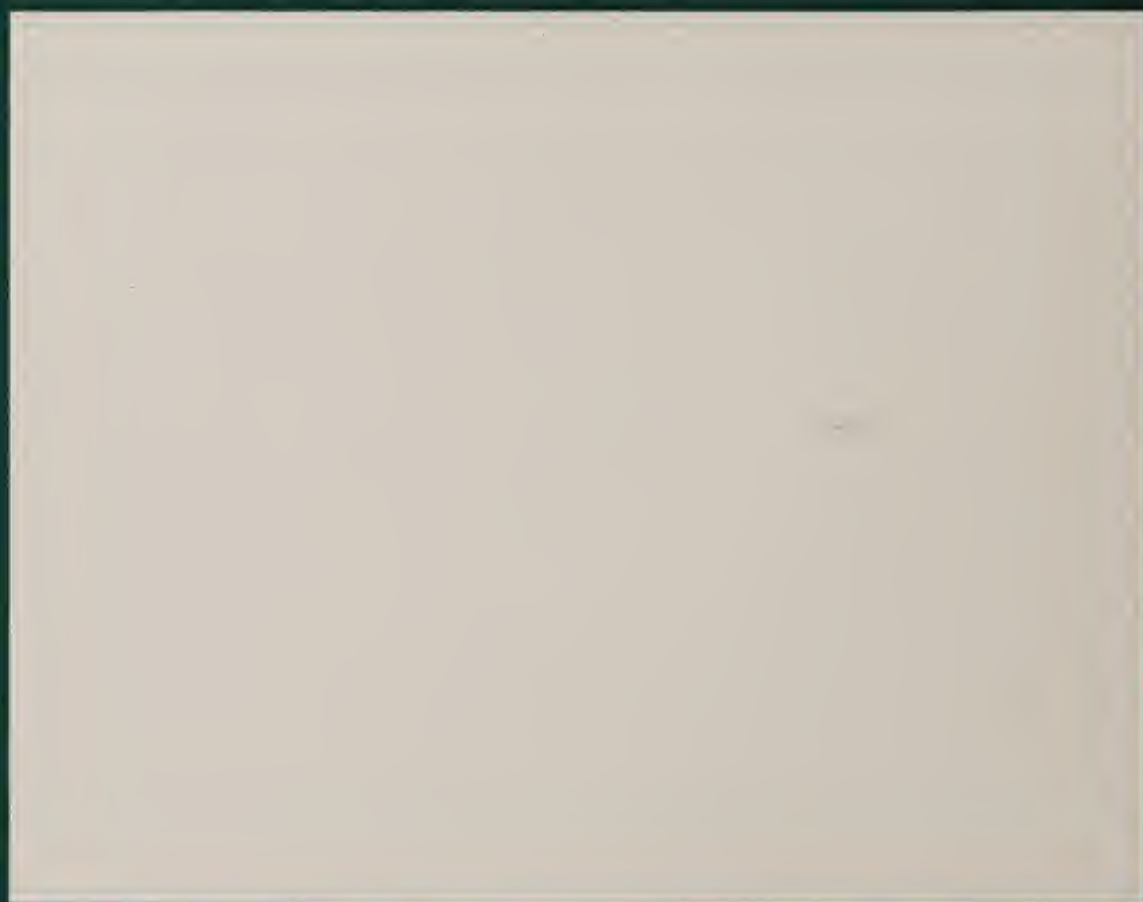
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